

# AMERICAN ARTISAN and Hardware Record

Vol. 79. No. 6.

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We have hundreds of **SATISFIED** customers throughout the country and they are proof of our ability to serve **YOU** efficiently.

Look over your stock now. See what you are in need of **AT ONCE.**

HANDLES, CONDUCTOR HOOKS, EARS, GUTTER HANGERS, VALVES AND PLUNGERS, CONDUCTOR PIPE, EAVE TROUGH, FIRE POTS, ROOFING SUPPLIES, SHEET METAL TOOLS, VENTILATORS AND SHEET METALS OF ALL KINDS.

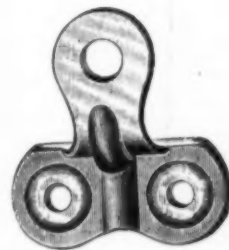
We have a new **LARGE** catalog which lists and fully describes nearly **every article in your line** that you can think of. This catalog contains much information and will be valuable for you to have on hand. We will gladly send you this catalog and prices on any special articles that you are interested in.

Write today for our Catalog No. 9

## BERGER BROS. CO.

229-231-233-235-237 ARCH ST.

WAREROOMS and FACTORY: 100 to 114 BREAD STREET  
PHILADELPHIA, PA.



No. 7

No. 10

# MAHONING HEATERS

**Sell Themselves**

So many superior qualities are involved in **MAHONING** construction that to tell of one would slight others equally as important.

No need to *talk* Mahoning qualities. *Show* your customer,—he will see it at a glance.

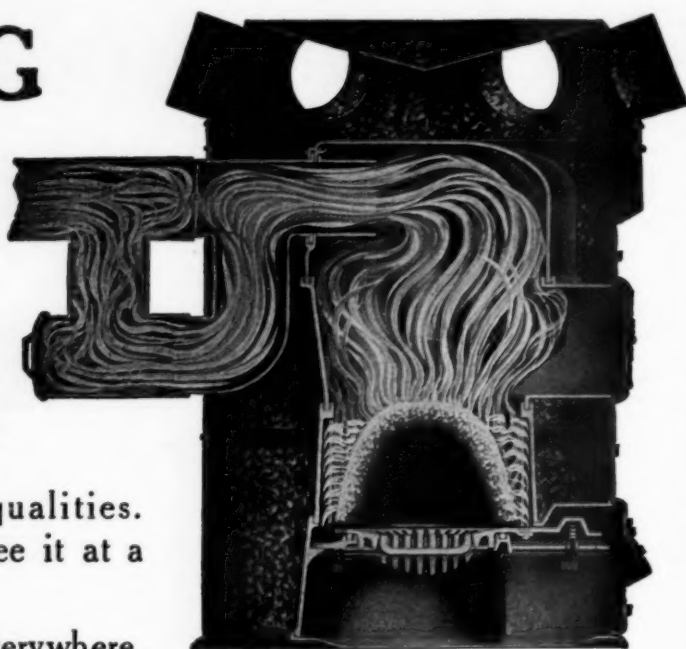
We want good live dealers everywhere, and offer a tempting proposition.

*A style and size for every purpose.*

## The MAHONING FOUNDRY CO.

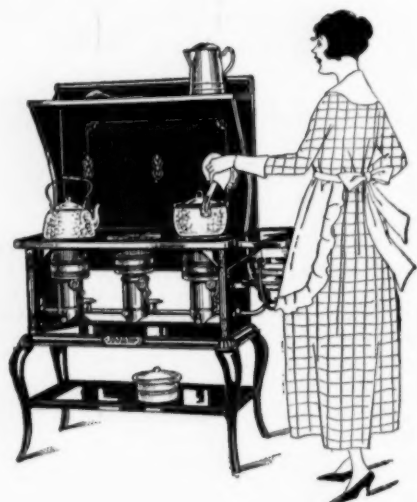
### YOUNGSTOWN, OHIO

*A Mammoth Plant With a Mammoth Production*



**MAHONING TYPE "C"**

Illustration shows quite clearly the combustion as it takes place in the Mahoning system. Note how the admission of air through the slots in the firepot causes combustion to take place all around the outside of the fire. The hottest part of the flame is in direct contact with the outside surface of the heater where the radiation of heat takes place. Only one of the features that have made the Mahoning famous from coast to coast.



There are so many splendid features to Clark Jewel Oil Stoves, that dealers find it very easy to convince their customers of the high quality and satisfactory operation of these excellent Oil Stoves.

High Speed Burners—short and close to the top—direct flame on vessel—fast and economical.

Large, roomy cooking top, wide set burners. Heavy Glass tank—oil supply always in view. Made in many styles and sizes.

It is highly important that you order early—these are days of Big Business.

## GEORGE M. CLARK & COMPANY

*Division American Stove Company*

**CHICAGO**

ESTABLISHED 1880

Representative of  
The Hardware, Stove,  
Sheet Metal, and Warm  
Air Heating and Venti-  
lating Interests

PUBLISHED EVERY SATURDAY

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WITHOUT INCURRING THE imputation of self-interest, physicians may urge upon the public the wisdom of calling in a member of their profession when the first symptoms of influenza appear. The people, as a rule, know that their motive is good. That is to say, the medical men are unanimous in holding that their work of combating the epidemic will be more effective if their services are engaged in time to prevent the development of serious conditions.

The same logic of motive applies in merchandising whether of ideas or commodities. The retailer who sells a washing machine wants his customer to consult him at the first indication of failure to operate properly in order that graver complications may be averted. If his trade is founded upon the rock bottom of service, he knows how essential it is to retain the good will of his customer. Therefore, he is careful to forestall or adjust small grievances lest they grow into irreconcilable dissatisfaction with him and his store.

Following this line of reasoning, it is legitimate and proper for the trade journal to set before its advertisers certain facts whose application tends to increase the results derived from its advertising pages. No one may justly question the strictly scientific impartiality of an expert as Professor Scott, author of such standard text-books as "The Psychology of Advertising," and "The Theory of Advertising." Painstaking experiments made by him prove that the value of a full page advertisement is double that of a half page—not merely in cost but in benefits.

As summarized by Professor Hollingsworth, lecturer in business psychology, School of Commerce, New York University, the tests conducted by Professor Scott were applied to over five hundred persons, giving each the same magazine and asking him or her to look it over, but not to read long articles or poetry. After having inspected the magazine for ten minutes, each was asked to write out all he remembered of all the advertisements which he had noticed.

Professor Scott, in addition, made up a magazine by selecting one hundred pages of varied advertising from a large number of magazines for the purpose of getting variety of material, size, form, type, and other details. These pages were then bound together with reading matter and sixty adults were requested to look through the magazine for an average of ten minutes. Each of them mentioned each advertisement remembered, gave its contents, and was then

again given the magazine and asked to point out all the pages now recognized as having been seen before.

The deductions from these experiments are briefly as follows: In the number of times the advertisement was mentioned from memory; in the number of times it was later recognized; and in the number of times it conveyed definite information as to the general class of goods advertised, the specific name or brand of the goods, name and address of the firm, and so forth, the rule was general that the full page was more than twice as effective as the one-half page. The half-page was also more than doubly as effective as the quarter-page, and this, in turn, more than twice as effective as the one-eighth page. Professor Scott formulates his conclusions in what may be accepted as a law of advertising, thus: "The attention and memory value of an advertisement increases as the size of the advertisement increases, and the increase of value is greater than the increase in the amount of space used."

PERHAPS, in some respects the greatest advantage of membership in a trade association is that it takes the bitterness and hostility out of competition. An example is given in the **Is Friendly** story of how a member of a hardware association changed the spirit of his fellow merchants when he began business in a new town. As a rule, the new merchant is not welcome to men who have had the field all to themselves. Nevertheless, this man was game. He called on his competitors, introduced himself, shook hands, and chatted over local conditions. A few reciprocated; others were cold and distant; one man showed the newcomer the door. Nevertheless, the new merchant persevered. When he urged early closing in the hardware trade all his competitors save one signed up. That recalcitrant held out for a month or more. Then, when he found that his competitors were going ahead with the innovation, regardless, he surrendered. The next step was the formation of a hardware association for that particular town, with a view to cooperation along various lines, and particularly in the matter of credits.

Yet if the newcomer hadn't had the courage to break the ice, the hardware trade in that particular town would have been as mutually hostile to day as they were five or ten years ago. One man, resolute to be friendly, can make a lot of difference in a community. There is no use waiting for the entire trade spontaneously to bring into existence an era of good feeling.



THE ADVANCEMENT OF industrial peace and public welfare is the declared purpose of the national labor board whose formation is recommended

**Gives Out** in the report of the Senate Committee  
**Labor Plan.** on Labor and Education in connection with its recent investigation of the steel strike. The recommendation of the committee proposes that Congress request the President to call in session a national industrial convention to consist of one hundred and fifty delegates, each of employers and employees to establish principles for adjusting labor disputes.

In its present form, the plan provides for a labor board to pass judgment on such disputes pending the action of the proposed industrial congress, and would be patterned after the war labor board, following the same principles and precedents that it established. It would receive for adjudication "either *ex parte* complaints or joint submissions from employers and employees, or it may institute proceedings in any controversy on its own motion or at the direction of the President or of the Congress." It is advised that the board establish in the leading industries "by conference and agreement joint boards for the adjustment of labor disputes and for such other purposes as it may deem proper for the advancement of industrial peace and public welfare." The resolution then takes up the question of creating the congress referred to:

"For the purpose of establishing permanent agencies for the adjustment of industrial disputes to supersede the national labor board, and for the further purpose of determining a permanent series of principles, or a code to govern future industrial relations and the adjustment of industrial disputes, and for the still further purpose of sanctioning standards of working conditions to obtain in industry, that a national industrial congress be called by the President, which shall be democratic and representative, composed of an equal number of voting delegates, of 150 each, from employers and employees."

In the group of employees, ten delegates are to be designated by the president of the American Federation of Labor and one delegate each by the chief executives of the national and international unions affiliated with the American Federation of Labor. Each of the four railroad transportation brotherhoods is to have the appointment of a delegate. The remaining number of delegates to make up the total 150 from the labor group to be selected from state and municipal federations of labor and from representatives of the National Women's Trade Union League, apportioned as may seem just and proper by the President's industrial conference, including ten to be selected from labor not affiliated with federations of labor.

In the group of employers, ten delegates are to be designated by the national industrial conference board. One delegate is to be selected by the president of each of the manufacturers' associations which are organized on a national basis, such as the National Erectors' Association, American Cotton Mill Manufacturers' Association, American Iron and Steel Institute, National Coal Operators' Association, etc. One delegate each is to be selected from the representative invest-

ment banking houses which have to do particularly with the financing of industrial transportation and corporations, such delegates not to exceed a total of twenty-five. Five representatives are to be designated by the Investment Bankers' Association. Thirteen representatives are to be appointed by the United States Chamber of Commerce. Twelve delegates are to be designated by the committee of railroad executives. The remaining delegates to make the total of 150 for the employers' group are to be chosen from other organizations of employers as the President's industrial conference may deem just and proper, including ten to be selected from industries not affiliated with any national association.

The value of the proposed labor congress will depend upon the degree of interest taken in it by the general public. If the people give it their endorsement and active support, there is no doubt that it will be the means of bringing about a better condition of affairs in the industrial world. Therefore, it behooves not only the manufacturers and jobbers of this country but the retail merchants to study this labor plan and to do their part in putting it into operation or modifying it in such a way as to make it practical and beneficial. This they can best accomplish through the agency of their organizations.

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LET US INQUIRE into what the possibilities and the material basis for prosperity in the United States are.

Sixty per cent of the copper of the world is mined in the United States. **The Basis for Prosperity.** This nation produces 72 per cent of the world's oil, 42 per cent of the iron, 37 per cent of the coal, 26 per cent of the silver and 20 per cent of the gold. According to the Department of Agriculture the total value of the crops harvested in the United States for the year 1919 was \$14,092,740,000. And on top of all this we have the most thoroughly developed railway system in the world. In a word, we have every material basis for prosperity. The skill of the American workingman is surpassed by that of no other nation. The education of the working people of this country has been the marvel of the world. Our technical skill is the greatest. Of all the natural resources known to be in existence within our boundaries a comparatively small portion has been extracted and utilized. Opportunity has wider bounds here than in any other nation. The earning capacity of the population is almost twice as large as its nearest competitor. Taking into consideration the great amount of money in the hands of the farmers, workers and the professional men, the constant increase of building activities, the expansion of foreign trade facilities—in short, surveying the existence of every single material basis for prosperity, is it not a wonder that it is not here yet? What delays the realization of that for which the stage settings are perfected? It is the mind of the people. The contrivances and the facilities exist. But it is the psychological state of the nation's mind that hinders prosperity's coming. This is manifested in the unrest of the workers to some extent. Traces of the abnormal state of the mental conditions which hampers a period of industrial supremacy and a carnival of



production are evident on the part of some manufacturers. Once these unhealthy conditions are alleviated the material basis for prosperity will assert itself. Indeed, business, commerce and industry will flourish in spite of the people themselves. The force of opportunity will overwhelm partisan ambition.

### **RANDOM NOTES AND SKETCHES.**

By **Sidney Arnold.**

Human nature abounds in odd twists and inconsistencies, declares my friend J. V. Armhorst of the Chicago office of Merchant and Evans Company, Philadelphia, Pennsylvania. He says that you may tell a man the earth weighs seven or eight billion tons and he will believe you. But if he sees a sign "Fresh Paint," he'll not believe it until he has tried it.

\* \* \*

Answers are not always in line with what we expect, says my friend Ed. H. Hoffeld, Vice-president and General Manager the Ferdinand Dieckmann Company, Cincinnati, Ohio. He gives this example:

The inspector was examining the class in geography, and, addressing a small boy in the back row, he asked:

"Now, sonny! Would it be possible for your father to walk round the earth?"

"No, sir!" replied the boy, promptly.

"Why not?" asked the inspector.

"Because he fell down and broke his leg yesterday."

\* \* \*

My friend Harry Van Bayse of American Furnace Company, St. Louis, Missouri, delights in repeating this story which a Georgia "cracker" tells about his own people.

A Northerner who had settled in Georgia was visited by a friend, who asked him how he liked the place and the people.

"Oh, all right," replied the man.

"Now, tell me," asked the friend, "What is a Georgia 'cracker'? How can you tell him from another person?"

"Well," replied the Northern settler, "you see out in that field a black object?"

"Yes," said the friend.

"Now," said the man, "that may be either a Georgia 'cracker' or a stump. Watch it for half an hour, and if it moves, why, it's a stump."

\* \* \*

Knowing how to do a thing perfectly or having ability or talent, out of the common run is worth big money nowadays, says my friend J. Lovell Johnson, President Iver Johnson's Arms and Cycle Works, Fitchburg, Massachusetts. By way of illustration he cites the following story:

Colonel J. H. Haverly, the o'd-time minstrel magnate, years ago conceived the idea of having Mme. Patti for a concert tour under his own direction, and called on her to make a contract. She received him most cordially, and the conversation went along swimmingly until they began to talk terms.

"May I ask your terms for fifty nights, Mme. Patti?" said Colonel Haverly.

"For concert or opera?" said the singer.

"For concert."

"Four thousand dollars a night, or \$200,000 for fifty nights, one-half to be deposited upon signing of the contract," said Patti glibly.

Colonel Haverly swallowed with difficulty two or three times, and then managed to speak.

"Two hundred thousand for fifty nights!" he exclaimed. "Heavens, madame! That is just four times what we pay the president of the United States!"

"Well," said Patti, "why don't you get the president to sing for you?"

\* \* \*

One doesn't often seek for humor in a church, says my friend E. S. (Dick) Moncrief, second Vice-president and Treasurer of the Henry-Miller Foundry Company, Cleveland, Ohio. He says that the other Sunday a certain congregation in his city were nearly thrown in convulsions of laughter.

The mirth was occasioned by a little boy who was being brought to service for the first time. When the choir entered in its surplices, he whispered audibly:

"Daddy, are they all going to have their hair cut?"

\* \* \*

We have often heard about the optimist and the doughnut. A practical example of the relationship is given in the following story by my friend F. E. Ederle, Secretary Michigan Sheet Metal Contractors' Association, Grand Rapids, Michigan:

The Smiths had been married about four months and since wifey could more tunefully perform on the piano than on the kitchen range, Smith had eaten things that reminded him of Fourth of July punk.

"Oh, Harry," enthusiastically exclaimed the wife, carrying in a dish one evening as he seated himself at the dining-room table, "I have been cooking you some o'd-fashioned crullers."

"That was very kind of you, dear," responded hubby, taking one of the dainties and heroically beginning to eat.

"I got the recipe from a cook book," continued wifey, with a pleased expression. "How do you like them?"

"Well," cautiously answered hubby, slowly munching the tasteless crumb, "the holes couldn't possibly be better."

\* \* \*

Practically all students of current tendencies agree that the most pressing need of our day is increased production—more work, better work, deeper interest in work, and a realization of the value of work as a factor in personal development. There is a special timeliness, therefore, in the subjoined poem of Henry Van Dyke:

#### **Each One's Work.**

Let me but do my work from day to day,  
In field or forest, at the desk or loom,  
In roaring market-place or tranquil room;  
Let me but find it in my heart to say,  
When vagrant wishes beckon me astray,  
"This is my work; my blessing, not my doom;  
"Of all who live, I am the one by whom  
"This work can best be done in the right way."

Then shall I see it not too great nor small,  
To suit my spirit and to prove my powers;  
Then shall I cheerful greet the laboring hours,  
And cheerful turn, when the long shadows fall  
At eventide, to play and love and rest,  
Because I know for me my work is best.

## UP TO THE MINUTE NEWS SIFTINGS

The American Stove and Range Company, Minneapolis, Minnesota, has bought a site at East St. Louis, Illinois, on which a stove foundry will be established.

### CHANGES ITS DISTRIBUTING POINT.

The National Stove Repair Company, Miamisburg, Ohio, announces that it will change its distributing point from Miamisburg, Ohio, to 325 Sycamore Street, Cincinnati, Ohio. This company is constructing a large number of warm air heater patterns. Thereby its extensive stock of repairs will be greatly increased. It is the intention of The National Stove Repair Company to supply stove and warm air heater repairs promptly from its new location due to better transportation facilities.

### IS A PROFITABLE LINE TO HANDLE.

A product which in appearance and service-giving qualities makes a profitable seller is illustrated herewith in the Red Star Detroit Vapor Oil Stove, manufactured by The



Red Star Detroit Vapor Oil Stove, Made by The Detroit Vapor Stove Company, Detroit, Michigan.

With but little care it will retain its luster. Only a dry cloth is needed to clean it. All nickel parts are highly polished. It has the appearance of a gas stove and can be placed into the most up-to-date kitchen. Its service-giving qualities commend it as an economical oil stove. A durable eight and a half pound burner without wicks or wick substitutes provides the fire. It is said that the amount of heat obtained by the Red Star Detroit Vapor Oil Stove is more economical than wood, coal or gas. The heating apparatus is so arranged that the flames are directed under the cooking utensils. A positive valve control regulates the heat like city gas. By simply turning the valve, the operator of this oil stove can always have a quick, hot fire or a slow steady fire. A double flue oven bakes perfectly and as fast as a gas range, declares the manufacturers. The convenient,

full length high shelf can be used for many purposes. Dealers should write to The Detroit Vapor Stove Company, Detroit, Michigan, and inquire for the Dealer's Catalogue depicting Red Star Detroit Vapor Oil Stoves.

### TRADE-MARK IS REGISTERED.

United States Patent Office registration has been granted to Albert Hinkley, Newark, New Jersey, under number 121,302, for the trade-mark shown in the illustration herewith. No claim is made to the exclusive use of the word "Hipolish," apart from the mark as shown in the drawing. Use of the trade-mark in connection with stove polish is claimed since May 2, 1919.



121,302.

### DELIVERS REPAIR PARTS PROMPTLY.

Quick shipments and the largest stock in the world are the claims of the Northwestern Stove Repair Company, Chicago, Illinois. No matter how obscure the make of the stove or warm air heater for which you seek a repair, this company declares it might have the part required in stock. It is said that many times after dealers had gone the rounds of almost every repair supply house seeking an unusual stove repair, the part was obtained from the Northwestern Stove Repair Company. Also, regular repairs of distinct quality can be furnished by this company. A chart published for the purpose of aiding dealers in selecting the proper repair part for heating systems is issued by the Northwestern Stove Repair Company. The sizes of the various parts contained in stock are set down on this chart. That all dealers should have a copy of the heating plant repair diagram on their walls, is the opinion of the Northwestern Stove Repair Company. For a copy of the repair parts chart or for information pertaining to stove or warm air heater repairs, write to the Northwestern Stove Repair Company, 654-666 West Roosevelt Road, Chicago, Illinois.

### GOOD SALESMEN STUDY HARD.

Necessary knowledge to make you a salesman, sought after and well paid, will not drift your way if you stand still and wait for it to come. There is no such luck. Enterprise begets ability, and ability more ability. There is no easy way to learn. You must have the inclination to develop the brains given you. You, yourself, set the limit on how far you can go.

It might be well to remember that fast men are usually slow pay.



# THE WEEK'S HARDWARE RECORD

*Of Interest to Manufacturer, Jobber and Retailer*

**AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 58 to 63 inclusive.**

The Henry Graves Razor Company, Geneva, New York, recently was incorporated with \$10,000 capital, by H. B. Graves, T. H. Warner, and G. E. Dean.

The Eastern Shear Company, New Haven, Connecticut, has been incorporated with \$100,000 capital, by L. M. Molloy, C. E. More, and T. F. Callahan.

The Russell and Erwin Manufacturing Company, New Britain, Connecticut, Division of the American Hardware Corporation, will erect a four-story factory addition.

The Providence Cutlery Company, Providence, Rhode Island, has been incorporated to make cutlery with \$10,000 capital by Domico Paolantonio, Joseph F. Rioux, and Raymond J. Rioux, both of Cranston, Rhode Island.

The H. F. Haessler Hardware Company, Milwaukee, Wisconsin, capital stock \$50,000, has been incorporated to succeed to the business of Herman F. Haessler, 132-134 Mason Street, manufacturing and dealing in builders' hardware, mechanics' tools, etc.

## LADIES ENJOY LUNCHEON AND CARD PARTY AT HARDWARE CLUB.

The social activities of the Hardware Club of Chicago are producing the results for which they were intended and planned at the beginning of the year. The deepening of the spirit of friendship which is so essential to the success of the organization is undoubtedly one of the things already accomplished. In line with this development of the Club's efforts, a very successful luncheon and card party was held for the ladies of the members in the commodious quarters of the Hardware Club of Chicago, southwest corner of Lake and State Streets, State and Lake Building, Chicago, Illinois. Sixty were in attendance. An appetizing luncheon was served, after which the ladies played Bridge and 500. The Committee in charge of the affair consisted of:

Mrs. William D. Lewis;  
Mrs. E. E. Williams;  
Mrs. Allan J. Coleman;  
Mrs. James A. Billings.

Five prizes were awarded in the card games, namely:

Two music records, donated by Cummings Forester Company;

Pair of scissors, donated by Erwin H. Funke;

A folding clothes bar, donated by A. Vere Martin;

Can of floor polish, donated by Allan J. Coleman;  
Bread knife, donated by Frank Furlong.

The success of the function encouraged the ladies to make arrangement for other affairs of the kind and, consequently, preparations have been completed for the holding of a Leap Year party, February 21, 1920, with a dinner and dance in the evening.

## OBTAINS REGISTRATION FOR THREE SEPARATE TRADE-MARKS.

Three separate and distinctive trade-marks have been registered in the United States Patent Office at Washington, D. C., by the Simonds Manufacturing Company, Fitchburg, Massachusetts. The trade-mark shown in the first illustration herewith bears United States patent number 121,728, and is granted under the ten proviso. The particular description of goods to which this trade-mark is intended to be applied is stated as saws. Use for this trade-mark is claimed by the Simonds Manufacturing Company, Fitchburg, Massachusetts, for forty-four years, dating back to 1876.

In the United States Patent Office Class 23, embracing cutlery, machinery, and tools, and parts thereof, registration has been granted to the Simonds Manufacturing Company, Fitchburg, Massachusetts, under number 121,793, for the trade-mark reproduced in the accompanying illustration. Use of this trade-mark is claimed since August 1, 1919. No registration rights are claimed for the word "Saw" apart from the mark shown in the drawing.

Under number 122,735, United States Patent Office registration has been obtained by the Simonds Manufacturing Company, Fitchburg, Massachusetts, for the trade-mark reproduced herewith. The Company claims use of this trade-mark since January, 1915, in connection with its saws. The pictorial representation of the man is fanciful. No registration rights are claimed for the representation of the saw apart from the mark shown in the drawing.



The clerk who cannot answer intelligently the questions customers ask about the goods he is selling has no excuse unless he is inexperienced, and that excuse will not hold for long.

## Wisconsin Retail Hardware Convention Gives Practical Lessons in Merchandising.

Both in the bigness of its attendance and in the practical value of the merchandising ideas brought out and discussed, the Twenty-fourth Annual Convention of the Wisconsin Retail Hardware Association held in Juneau Hall of the Auditorium, Milwaukee, Wisconsin,



Badge of Convention of Wisconsin Retail Hardware Association.

sin, February 4, 5, and 6, 1920, was the most remarkable and fruitful Annual Meeting of that organization ever held. The power of concentration of purpose operating through efficient management was fairly demonstrated in the bringing together of so many alert, earnest, and enthusiastic hardware merchants. To the officers of the Association and in particular to P. J. Jacobs, the Secretary, is due unstinted praise for their tireless labors in getting the members of the Wisconsin Retail Hardware Association to come to the Convention and to take a deep and active interest in its proceedings. More than 800 hardware firms were represented in the assembly. In point of numbers and enthusiasm, it was the greatest crowd that ever attended any Convention of the Wisconsin Retail Hardware Association.

Wednesday, February 4, 1920.

At the hour set for the formal opening of the Convention and Hardware Exposition of the Wisconsin Retail Hardware Association, everything was in place in the Main Arena and Kilbourn Hall, of the Auditorium, Milwaukee, Wisconsin. The first session began in Juneau Hall of the Auditorium with community singing under the leadership of Theodore Kraft. This was followed by the Annual Meeting of the Hardware Dealers' Mutual Fire Insur-

ance Company, which opened with the reading of the minutes of the last annual meeting. Then came the report of President O. P. Schlafer.

The most prosperous year of its existence is reported to have been the distinguishing characteristic of the 1919 business of the Hardware Dealers' Mutual Fire Insurance Company of Wisconsin, which held its annual meeting in the Auditorium, Milwaukee, Wisconsin, February 4, 1920. The organization has an exceptionally low rate and its investments are of a type which guarantees the highest degree of protection of the reserve funds of the company. Much credit is due to the officials of the company and particularly to O. P. Schlafer, who has been President of the Hardware Dealers' Mutual Fire Insurance Company of Wisconsin for sixteen consecutive years. His annual report is as follows:

**Report of O. P. Schlafer, President of the Hardware Dealers' Mutual Fire Insurance Company of Wisconsin, Delivered at the Annual Meeting in the Auditorium, Milwaukee, Wisconsin, February 4th, 1920.**

It is with a great deal of satisfaction that I am able to report to you that this company had in 1919 the most prosperous year of its existence. The volume increased over ten million with an increased premium income of nearly \$200,000. We now have over thirty-five million at risk, which is double the amount of two years ago. To predict that we will have fifty million this time next year with an income of a million dollars is not beyond the possibilities of our plant at Stevens Point, Wisconsin.

Much of this increase is due to increasing values and with the completion of inventories the requests for additional insurance are pouring into the Home Office.

At our directors' meeting last August, the limit on a first-class risk was increased from \$7,500 to \$10,000, and with the volume on our books in excess of this amount, which is now reinsured, the limit will no doubt be fixed at \$12,500 during the coming year.

### Wisconsin Mutual Has a Low Rate.

The average rate over the United States is approximately 2 per cent. In Wisconsin, however, it is a trifle below 1½ per cent, which goes to show that we are enjoying a lower insurance tax than in other parts of the country.

We now have \$653,336 invested in securities that are deposited with the Second Ward Savings Bank of Milwaukee for safekeeping. Of these, \$375,000 are Liberty Bonds and the balance Wisconsin Municipals.

### Losses Are Below the Average.

Losses for the year are again below the average. Since organization our losses have averaged 26 per cent of the premiums, while in 1919 they were but 18 per cent. This is the lowest in the history of our company—1917 was the nearest approach to this when the losses were 19 per cent. In Wisconsin they were 26.22 per cent, exceeding the average for the year by a little over 8 per cent.

The customary 50 per cent dividend was declared on all policies expiring in 1920, and \$112,791.38 was put to surplus.

A year ago the Board of Directors adopted a resolution extending the coverage to include implement dealers. The Insurance Department at Madison suggested that we amend our articles of incorporation to conform to this resolution, and before we adjourn you will be asked to vote on this amendment, a copy of which was mailed to every policyholder the first of the year.

### Cyclone Insurance Is To Be Added.

Cyclone insurance is growing in demand and that our policyholders may not be required to patronize the stock companies for this, your Board of Directors recommended that our coverage be extended to include tempest, windstorm, tornado, cyclone or hurricane. This change has been embodied in the same article and will be disposed of at the same time as the other.



Additional quarters at the Home Office are rapidly becoming necessary and with none sufficient to house our activities available, the Board of Directors at the November meeting authorized the purchasing of a site at Stevens Point with a view of erecting a Home Office that will reflect the dignity of the institution it will house.

The Standard Oil Company now owns the best corner in the city of Stevens Point, upon which they intended to erect a service station, but our secretary persuaded them to let us have it, and they will acquire another. The papers are now being prepared and within a short time the transfer will be made.

#### Has Served for Sixteen Years.

For sixteen consecutive years I have appeared before you on this occasion and I want to assure you that each year it becomes a greater pleasure. To be the President of so prosperous an institution is indeed a privilege.

A detailed report of the transaction and investments will be handled by the Secretary.

The report of P. J. Jacobs, Secretary, Wisconsin Hardware Dealers' Mutual Fire Insurance Company, showed the insurance in force December 31, 1919, to be \$35,318,913.00. Dividends to policy holders amounted to \$244,699.74.

Three directors were elected to serve for three years, namely, E. H. Ramm, of New London; R. M. Burtis, Oshkosh, and R. C. Murdock, of Beloit.

During the meeting, President Schlafer called upon Thomas G. McCracken, Secretary, Retail Hardware Mutual Fire Insurance Company of Minnesota, to address the assembly upon matters of insurance. He was followed by C. I. Buxton, of Owatonna, Minnesota, Secretary of the Minnesota Retail Implement Association.

The articles of incorporation of the Wisconsin Hardware Limited Mutual Liability Insurance Company were amended and the name of the Company changed to Hardware Mutual Casualty Company. The amendment enlarges the scope of the Company's insurance service. Instead of the words in Article 1 defining business to be undertaken against loss or damage to the automobile of any person by fire and theft, the amendment inserts the words: "against loss or damage to automobiles or other vehicles and their contents by collision, fire, burglary or theft, and other perils of operation, and against liability for damage to persons or property of others by collision with such vehicles, and to insure against any loss or hazard incident to the ownership, operation or use of motor or other vehicles."

The meeting ended with a discussion of fire insurance through the Question Box.

At 11:00 a. m., Wednesday, February 4, 1920, the Wisconsin Hardware Limited Mutual Liability Insurance Company held its Annual Meeting and received the report of President O. P. Schlafer.

O. P. Schlafer is also President of the Wisconsin Hardware Limited Mutual Liability Company, which works in close harmony with the other insurance organization, of which he is also President, namely, the Hardware Dealers' Mutual Fire Insurance Company of Wisconsin. The Sixth Annual Statement of the Wisconsin Hardware Limited Mutual Liability Company is herewith set forth in the annual address of its President, O. P. Schlafer:

**Address of O. P. Schlafer at the Annual Meeting of the Wisconsin Hardware Limited Mutual Liability Company, February 4, 1920, in the Auditorium, Milwaukee, Wisconsin.**

The Sixth Annual Statement of this Company, a copy of which was mailed you, shows a total of \$140,967.32, busi-

ness written during 1919. This shows an increase over 1918 of 60 per cent and is distributed as follows:

Compensation .....	\$55,143.35
Automobile .....	75,424.93
Plate Glass .....	10,399.04

Our Compensation business has not increased in proportion to Automobile and Plate Glass. The slight increase in premiums is due to larger payrolls on policies in force. Compensation losses amount to 30 per cent of premiums written, whereas our total loss ratio is only 17 per cent. This reveals the fact that our Compensation business is not as profitable as our other lines.

#### Big Increase in Automobile Insurance.

The premium increase on Automobile business is 125 per cent and on Plate Glass business 150 per cent. The automobile increase is only natural, due to the constantly increasing number of motor vehicles. With traffic becoming more and more congested, very few have found it a profitable investment not to carry automobile insurance.

While we have had a splendid increase in the number of Plate Glass policies issued, a large portion of our premium increase on this class of business has been due to a big advance in rates, which was made necessary because the value



O. P. Schlafer, President Wisconsin Hardware Limited Mutual Liability Company and of the Hardware Dealers' Mutual Fire Insurance Company of Wisconsin.

of Plate Glass as it stands in its frames today is between four and five times greater than it was five years ago. However, the ratio of increase in rates is not nearly as great as the ratio of increase in liability which the company has assumed.

During the year a total of five hundred and ninety-six claims were received of which all but fifty-six were settled on January 1st.

#### Dividends Are Substantial.

Because of our excellent experience, our dividend on all classes of business has been increased to 33 1/4 per cent on policies expiring in 1920. However, the reserves which a company of this kind must build up and maintain, makes the prospect for a larger dividend remote.

Our assets increased 90 per cent over a year ago and our cash and investments now total \$118,359.15. Of this amount, \$83,748 is in Fourth Liberty Loan Bonds.

That our wonderful progress will be continued in 1920 is almost assured for the reason that during the first fifteen days of January, we wrote more business than was written during the combined months of January and February, 1919.

The last session of the Legislature made it possible to shorten our corporate name and before this meeting adjourns you will have an opportunity to vote on an amendment to our Articles of Incorporation, shortening the name to four words instead of eight. Automobile coverage should be more specifically defined and an amendment to take care of this will also be submitted for your consideration.

The report of the Secretary-Treasurer of Wisconsin Hardware Mutual Liability Insurance Company, P. J. Jacobs, disclosed a flourishing condition of its

finances and indicated satisfactory prospects of larger developments of benefit to its policy holders.

Secretary P. J. Jacobs called on his son Carl N. Jacobs, Assistant Secretary, Hardware Dealers' Mutual Fire Insurance Company, Hardware Mutual Casualty Company, Stevens Point, Wisconsin, who spoke instructively on hardware mutual insurance.

The Articles of Incorporation of the Hardware Mutual Fire Insurance Company of Wisconsin were amended at the meeting to include and indemnify its members against actual loss by tempest, windstorm, tornado, cyclone or hurricane. This is in addition to the old Article of Incorporation which included only damage by fire and lightning to the stocks of retail hardware dealers. The amendment is modified to include retail implement dealers and to cover insurance upon implements as well as hardware stocks and fixtures. The meeting closed with a discussion of liability insurance through the Question Box.

In the afternoon of Wednesday, February 4, 1920, at 2:00 o'clock delegates to the Wisconsin Retail Hardware Association Convention assembled in Juneau Hall of the Auditorium, Milwaukee, Wisconsin. The proceedings began with community singing under the skilled leadership of Theodore Kraft. Then came the annual message of A. J. Strang, of Richland Center, Wisconsin, President of the Association, which is as follows:

**Address of A. J. Strang, President of the Wisconsin Retail Hardware Association, Delivered February 4, 1920, at the Convention of the Association in the Auditorium, Milwaukee, Wisconsin.**

Each succeeding president, in his address to you, declares, in all sincerity, that it is the most important meeting in the history of our Association.

I can well remember the first Association meeting I attended about twenty years ago. About fifty or sixty earnest and progressive business men gathered together in a small hall at the Republican Hotel, transacting routine business and planning to improve the Association and make it more attractive to prospective new members.

We all know the results of the well-formed plans of these unselfish pioneers. Soon more spacious quarters were necessary and a few conventions and exhibits were held in the West Side Turner Hall. Then to the more commodious quarters at the Public Service Building. And now, the mammoth Auditorium Building is taxed to its capacity to accommodate our conventions and exhibits.

The men at the throttle have carefully carried us through trials and tribulations—putting on the air if we became too impulsive—putting fire and steam in our programs if too slow. The integrity and unselfishness of these men have won honors and memorials that time can never erase.

Every man of us firmly believed that the nerve-racking period of the World War had reached the summit of Old Mount Trouble, but it seems that we must commandeer our aeroplanes and soar into higher altitudes and seek the solutions of many perplexing problems of reconstruction.

It is pretty hard for the average man to remain optimistic and go through things like this man writes:—

"I have been held up, held down, sand bagged, walked on, sat on and flattened out and squeezed, first by United States war tax, excess profit tax, Liberty Loan bonds, Thrift Stamps, for State, County and Auto tax, by every society of John the Baptist, G. A. R. and Women's Suffrage, the Navy League, and Red Cross, Double Cross, Black Cross, the Girls' Scouts, Boys' Scouts, the Children's Home, the Dorcas Society, the Jewish Relief, Belgian Relief, and every hospital and college in town and state.

"The Government has so governed my business that I don't know who owns it. I am inspected, suspected, examined and re-examined, informed, required and commanded so I don't know who I am, where I am or why I am here.

"All I know is that I am supposed to be an inexhaustible supply of money for every human need, desire or hope of the human race and because I will not sell all I have and go out and beg, borrow or steal money to give away, I have been cussed, discussed, boycotted, talked to, talked about, lied to, lied about, held up, hung up, robbed and nearly ruined, and

the reason I am clinging to life is to see what in H— is coming off next."

#### Has a Gain in Membership.

Let us leave the pessimist and get back to our Association work. A year ago there were 1,147 members in our Association, today there are 1,158—a gain of 11 members. This may seem like a small increase, but listen—we have over 95 per cent of all the eligible hardware men in the State enrolled. Can you beat that? I'll say you can. Appoint yourself a committee of one and go out and get that 5 per cent.

Two hundred and fifty-three members sent in their freight bills to be audited; \$830.34 was refunded to these members through this activity.

Seventy-two members sent in their accounts for our Collection Department. One hundred and forty-four collections were made and the amount forwarded to our members was \$1,394.65.

These 72 members can see the folly in patronizing other collection agencies when we own one of our own. The same or even better attention will be given your accounts than by other agencies and there is no question that the funds collected will be remitted to you promptly.

#### Praises Work of Secretary Jacobs.

This has been an exceptionally hard year for the Secretary, and I often wonder if we half appreciate him. Carl was in overseas service, impatiently waiting to get back into the game he loves so well and plays so efficiently. R. A. Peterson was called away to fulfill the office of editor of our National Hardware Bulletin. Did you see a slowing up in any of our Association activities? Not so that you could notice it. P. J. Jacobs does not slow up.



A. J. Strang, Retiring President Wisconsin Retail Hardware Association.

R. A. Peterson, our assistant secretary and field man, established three credit bureaus, and had he remained with us would have established four or five more by this time.

Mr. Peterson left us to accept the new position, August 15th. The great improvement in the Bulletin since he took charge is commented upon by every one.

Since this date we have been without an assistant secretary or field man, but Mr. Jacobs informs me that he is about to close up with a man to assume these duties on or about the first of March.

Men of Mr. Peterson's caliber and ability are rare and difficult to locate and the short time he was with us demonstrated the necessity and the benefits accruing from a field service man.

It will be impossible for a field man acting in the capacity of an assistant secretary to call upon every one of our members every year, but there is no question that a visit from a man who visits all the stores in the state can be capitalized by our members, and made of considerable more value than the annual dues to the Association.

Years ago the insurance feature was held up as the main benefit to be derived from our Association. Today, however, there are many other benefits rotating from an Association of this kind, and it is through the services of a man of this kind that these benefits can be distributed.

To finance the salary of a man of this kind and take



care of his traveling expenses requires nearly the entire present income from membership dues. Wisconsin has always been foremost in association activities, and in order to carry out the program of the National Association it will be necessary before the convention adjourns to take some action upon the increase in our membership dues. Every one here attending the convention is in favor of placing the dues at a figure that will make it possible for Wisconsin to maintain its present position among the other State Associations. The indifferent ones at home will be made to realize that the Association stands for something and in order to maintain it, it takes money.

#### Gives Reasons for Increase of Dues.

Some manufacturer who has been discriminating against the retailer in favor of the mail order houses took exception to some of the work of our Association and complained to the Federal Trade Commission. An attorney representing the commission visited our office at Stevens Point, November 10th and 11th, and made a thorough examination of the books and files in the office. Copies of over two hundred letters were made and carried away with him. Copies of the minutes of our meetings are also in the possession of the commission. The gentleman who examined us told the Secretary that the work of our Association was to be commended and that in all his experience he never examined an institution that conducted its work along the lines that we did. Nothing has been heard from the commission as the result of this examination, and it is very likely nothing will. Should it become necessary to make answer and defend the actions of our Secretary, funds will be required, and for these reasons your Executive Committee on two different occasions reviewed the entire situation and has recommended to this convention that the By-Laws of our Association be amended to increase the dues from \$5.00 to \$10.00.

At a meeting of our Board of Directors of the Hardware Insurance Companies, November 5th, they authorized the purchase of a site for a building in Stevens Point. I understand this building is to be erected during 1921. Provisions will be made in this building to house our Association and its activities.

This has been the busiest and most profitable year for your Association, made possible by efficient and unselfish services of your officers, cooperation and loyalty of its members. Let us be duly thankful.

At the conclusion of President Strang's annual message, the following committees were announced:

#### Committees.

1. Reception—M. Gruenwald, Milwaukee; J. O'Neill, Milwaukee.
  2. Question Box—A. C. Mason, Chippewa Falls; F. J. Martin, Mineral Point; William Ott, Baraboo.
  3. Suggestions—E. B. Baldwin, Sparta; O. Griesser, Medford; F. J. Kilmer, Oconto Falls; R. R. Uttormark, Seymour.
  4. Grievance—L. C. Peck, Berlin; L. E. Quinn, Rice Lake; C. A. Parker, Viroqua; S. L. Chicker, Ladysmith.
  5. Legislation—Louis Hirsig, Madison; Albert Schwandt, Campbellport; G. F. Behnken, Mauston; Albert Schlatter, New Glarus.
  6. Resolutions—H. C. Scofield, Sturgeon Bay; B. C. Davis, Richland Center; R. W. Schellenger, Beloit; John Bruegger, Watertown.
  7. Nominating—Fred G. Reinhold, Milwaukee; J. B. Pierce, Brodhead; Fred Griebenow, Owen; B. L. Walter, Green Bay.
  8. Auditing—Jos. M. Marshall, Stevens Point; Gerald Galpin, Appleton; W. T. Stillman, Oshkosh.
  9. Press—P. J. Jacobs, Stevens Point.
- Sergeant-at-Arms—Edw. J. Kraus, Milwaukee.  
 Usher—J. H. Weber, Milwaukee.  
 Manager of Exhibits—Geo. W. Kornely, Milwaukee.

After the announcement of Committees, a highly instructive talk was given on "Sales and Profits" by E. G. Weir, Dowagiac, Michigan. He demonstrated quite clearly that there is not much use in making sales if sufficient profit is not derived from the transactions. He said that the hardware merchant must know his cost of doing business in order to make a reasonable profit. He pointed out the necessity of accurate accounting and personal efficiency in the handling of commodities, and intelligent service as elements of salesmanship.

Mr. Weir was followed by H. F. Krueger, who led the general discussion on "Value of Jobber's Price Book."

In the evening of Wednesday, February 4, 1920,

a theater party in the Majestic, on Grand Avenue, was given to the delegates and their womenfolk by the hardware jobbers and manufacturers of Milwaukee.

#### Thursday, February 5, 1920.

The morning session in Juneau Hall of the Auditorium was devoted to topics presented through the Question Box. It opened with community singing under the leadership of Theodore Kraft. In order that the members present might feel no embarrassment in presenting confidential matters for discussion through the Question Box, it was announced that no stenographer was present and that everyone should feel free to present problems and to make comments without fear of being quoted afterward.

A printed list of questions submitted for discussion



P. J. Jacobs, Re-elected Secretary-Treasurer Wisconsin Retail Hardware Association.

was circulated among the members and question No. 1 on "Income Tax and Soldier's Bonus" was answered by H. Elwell, Madison, Wisconsin, of the United States Tax Commission. Question No. 2, "Where Can We Find Out How Farm Buildings Should Be Wired to Comply with the National Electric Code" was answered by J. E. Florine, of the Industrial Commission of the State of Wisconsin.

Stewart Scrimshaw, of the Industrial Commission of the State of Wisconsin, answered question No. 19: "Can the Industrial Commission Assist Us in Getting Tinner Apprentices?" Several of the questions were also clearly and satisfactorily answered by A. T. Van Der Voort, of Lansing, Michigan.

The afternoon session, Thursday, February 5th, began with community singing as usual under the leadership of Theodore Kraft.

The steel situation was discussed by H. A. Squibbs, of the American Steel and Wire Company, Chicago, Illinois. The very important topic of "You and Your Business" was cleverly treated by R. A. Peterson, formerly Assistant-Secretary of the Wisconsin Retail Hardware Association.

Some startling facts of immense significance to the

hardware dealers of the country were presented to the Convention by A. T. Van Der Voort, of Lansing, Michigan. Taking up the question of the Winchester Chain Stores, he declared it to be his conviction that it is not wise for the retailers to change their basis of supplies by departing from present jobbing methods. He gave his reasons in a vigorous and logical manner. He pointed out that retailers of the country are facing a much more serious problem in the rapid spread and development of cooperative buying on the part of railroad men. In Michigan, he said, the membership of the cooperative buying movement is seventy thousand strong and soon expects to be two hundred thousand. They have several million dollars already saved up and intend to buy factories for the production of commodities for their own use. He declared that the brotherhoods of railroad train men were 600,000 strong in the United States and have ample funds running into the millions wherewith to buy factories



Louis Hirsig, Newly Elected Vice-President Wisconsin Retail Hardware Association.

and supplies for the production and distribution of food and clothing and other necessities for their membership. They are cutting down the retailers' business in all the prominent cities. These, he stated, are powerful reasons why the hardware merchants should strengthen their organization and why this is not the right time for them to go into any new scheme of merchandising. They can gain more patronage and increase the volume of their sales only by paying more attention to service and introducing methods of the highest efficiency in the operation of their stores.

In the evening at 8:00 o'clock, Thursday, February 5, 1920, the Main Arena and Kilbourn Hall were crowded with members and their friends and women-folk who came to enjoy the band concert. The program of the concert was as follows:

1. March .....On the Square  
Panella.
2. Overture ..... Orpheus  
Offenbach
3. Egyptian Serenade.....My Cairo Love

4. Medley .....Zamecnik.....Popular Airs
5. Ballad .....Remick.....Tell Me  
Callahan.
- INTERMISSION.
6. Novelette .....Simplicity  
Lee
7. Descriptive Fantasia .....Luders
8. Oriental Fox Trot.....The Vamp  
Gay
9. Selection .....Sweethearts  
Herbert.
10. Girl of the Orient.....Allen

Friday, February 6, 1920.

After the community singing under the direction of Theodore Kraft, Friday morning's session took up the reports of the Committee on Suggestions, the Grievance Committee, and the Committee on Legislation.

The report of the Legislative Committee was as follows:

This Association and the Hardware Mutuals were interested in one way or another in twenty-eight Assembly and twenty-two Senate bills. Of the twenty-eight Assembly bills only two became laws. The other twenty-six were either withdrawn or indefinitely postponed. Our Liability Company will be able to shorten its name as the result of one measure passed and the other had to do with our Lien Law.

The Lien Law was amended to include the work of a beast of burden. Your committee saw no objection to this amendment and it was allowed to pass.

In the Senate two bills on our list were enacted into laws. The Compensation Act was amended so as to increase the benefits to injured employees 50 per cent. The Plumbers strengthened their statute by an amendment. All the rest were either withdrawn or indefinitely postponed.

We will not take up your time telling of the work necessary to bring such results about. The fact that nothing new affecting the hardware trade directly was enacted will suffice. Much work was done by various interests to amend our present Trading Stamp Law. This measure required the attention of your committee oftener than all the others put together, but we were finally successful in having it indefinitely postponed and the Trading Stamp Law remains just as it was passed two years ago.

(Signed) LOUIS HIRSIG, Madison.  
P. M. ELLINGSON, Edgerton.  
F. C. PHILLIPS, Stoughton.  
WILLIAM OTT, Baraboo.

The plan was carried out by which the assemblage of the morning was divided into three groups; each group to have a separate room where questions can be discussed freely without the feeling that it is necessary to make a speech. Dealers from towns of five thousand population and up constituted one group; those from one thousand to five thousand another, and those from the smaller communities still another. In order that they might feel at liberty to discuss matters without restrictions of any sort, no stenographer was present.

The concluding session of the Twenty-fourth Annual Convention of the Wisconsin Retail Hardware Association was held at 2:00 o'clock in Juneau Hall of the Auditorium, Friday afternoon, February 6, 1920. After community singing under the leadership of Theodore Kraft, reports were made by the Committee on Resolutions, the Auditing Committee, and the Nominating Committee.

The recommendations of the Nominating Committee were unanimously adopted by the assembly and resulted, therefore, in the election of the following men to conduct the affairs of the organization during the ensuing term:

President: A. C. MASON, Chippewa Falls.  
Vice-President: LOUIS HIRSIG, Madison.  
Secretary-Treasurer: P. J. JACOBS, Stevens Point.  
Executive Committee: E. W. STAADT, Milwaukee;



JOHN A. PAHL, Sister Bay; L. C. PECK, Berlin; E. B. BALDWIN, Sparta.

Delegates to the Convention of the National Retail Hardware Association were elected as follows: A. C. MASON, Chippewa Falls; LOUIS HIRSIG, Madison; P. J. JACOBS, Stevens Point.

The new President was not in attendance at the session when he was chosen to fill the highest office in the gift of the Association. Very much against his will, he was kept away from the meeting by an attack of illness which, however, is said not to be of a nature likely to produce serious consequences.

After the adjournment at 4:00 o'clock, the meeting of the Executive Committee and officers was held for the purpose of coordinating plans for the coming year and strengthening the spirit of cooperation among the various officers entrusted with the administration of the Wisconsin Retail Hardware Association.

### CONVENTIONALITIES.

Geo. B. Carr, representing the Carr Supply Company, Chicago, Illinois, was present and shook hands with many of his old friends.

In the booth of W. L. Nesbitt of Minneapolis, Minnesota, was represented the Clinton Furnace and Stove Company, Clinton, Indiana; Gohman Brothers and Kohler Company, New Albany, Indiana; Karr Range Company, Belleville, Illinois; and Walker and Pratt Manufacturing Company, Boston, Massachusetts.

Gus Warnhoff, H. F. Jackson, and I. S. Pickup were present representing The Stanley Works, New Britain, Connecticut, and Chicago, Illinois.

The Hart and Cooley Company, New Britain, Connecticut, manufacturers of wrought steel registers and grills, were represented by R. W. Blanchard.

A demonstration of the Z. T. Soot and Gas Consumer, manufactured by the Z. T. Soot and Gas Consumer Company, Oshkosh, Wisconsin, was under the charge of Mathew Zentner and Richard Teela, who answered many questions pertaining to the article that they displayed.

A booth exhibiting the heaters and ranges made by Moore Brothers, was under the charge of A. D. Meyer of Milwaukee, Wisconsin.

George M. Clark and Company, Division of American Stove Company, Chicago, Illinois, had an instructive display of their ranges, and were represented at the convention by J. Boehm and F. Gassmann.

The booth of the Northern Corrugating Company, Green Bay, Wisconsin, showing corrugated sheet metal products was under the able charge of A. M. Smith, J. M. Smith, A. G. Krueger, and P. F. Flagge, who were present representing the company.

Mrs. J. Remer had a booth showing the "Metalglas" products of the Eclipse Manufacturing Company of Indianapolis, Indiana.

A display of small clamps which elicited attention was shown by the Wilmette Tool Company, Wilmette, Illinois.

The Milwaukee Corrugating Company, Milwaukee, Wisconsin, distributed a handy desk mirror on the back of which is an illustration of their Syphon Ventilator.

A calendar of unusual neatness with a meaningful

illustration of two children portraying "Happiness" was given out by the Buffalo Sled Company, North Tonawanda, New York.

At the booth of The Excelsior Steel Furnace Company, Chicago, Illinois, was R. W. Menck, C. E. Glessner, J. P. Brooks, Joseph Goldberg, and A. B. Glessner. A. W. Glessner, president of The Excelsior Steel Furnace Company, and his son, Herbert Glessner, are at Florence Villa, Florida, and could not attend the convention.

In Kilbourn Hall, the most promising exhibit was that of the Meyer Furnace Company, Peoria, Illinois. They showed one of the Weir Steel Warm Air Heaters and gave out some handsome books as souvenirs and the space was also utilized by R. Meyer and Brother Company, who gave away a handsome lead pencil. The exhibit was looked after by Ed Harms, H. G. Barragar and Jas. F. Flavelle.

One of the most attractive exhibits was that of E. C. Atkins and Company, the saw manufacturers of Indianapolis. The wants of their trade was looked after by Wm. de R. Knight, Bruce G. Nelson and A. T. Marsan. A watch chain charm in the form of a tiny saw was distributed by the Atkins people as a souvenir.

Wm. E. Lamneck Company of Columbus, Ohio, had their Chicago representative, the Central Heating Supply Company, look after their wants and they were represented by the proprietors, J. H. "Harvey" Manny and Tom Pearson.

The Tuttle and Bailey Company showed samples of their warm air registers in both cast iron and steel and their wants were looked after by Wm. P. Laffin and T. A. Warner. Their New York representative, Mr. Robert Ketting, was inquired after by a great many friends, as Bob expected to be present in Milwaukee, but was detained in New York on account of illness.

The Central Heating Supply Company of Chicago had two spaces on the stage of the main auditorium, but unfortunately their warm air heaters did not arrive, but they were undaunted and helped to entertain their friends, who were many.

The American Steel and Wire Company had the rest room, where their many friends made themselves at home. They were looked after by H. H. Squibbs, Stephen Hanna, Grant Phillips, Lewis Harter, Frank Gebbs and John Hoefels.

The Lennox Furnace Company of Marshalltown, Iowa, had their usual exhibit and showed their Torrid Zone All Steel Warm Air Heater and Their New Monopipe Warm Air Heater. They were represented by R. T. Wasson, A. F. Wood and S. C. Whitcher.

The Malleable Range Company of South Bend, Indiana, had a number of samples of their malleable ranges, which were shown by their Mr. J. J. Woolbertson and Scott Bowen.

The Hart and Cooley Company, New Britain, Connecticut, makers of a full line of steel registers, had a magnificent display, which was looked after by their Mr. R. W. Blanchard.

The Milwaukee Corrugating Company of Milwaukee, Wisconsin, had a magnificent booth, which was illustrative of what could be made out of sheet metal.

The booth was handsome and was finely decorated with natural flowers. They had a crowded house all the time and the wants of their many friends were looked after by Louis Kuehn, A. J. Luedke, J. H. Christman, "Doc" Scheder, Thos. Evans, Clem Willman and A. Schmeltzer. They gave away a number of magnificent souvenirs.

The Quick Meal Stove Company, Division of the American Stove Company of St. Louis, showed samples of their well-known line and their display was looked after by their Mr. A. M. Rawlings.

The Buffalo Sled Company of North Tonawanda, New York, showed their new coaster, which was very attractive and it was shown by their Mr. J. E. Decker.

R. J. Schwab and Son Company of Milwaukee, Wisconsin, had one of the most attractive displays and showed a number of their Gilt Edge warm air heaters and a number of warm air heater fittings. Their exhibit was looked after by their Mr. Henry E. Schwab, George E. Murphy, Chas. Myrtle, A. E. Zeilich and Al Pomraning.

Mr. H. L. Hoffman, the sales manager of The Schill Brothers Company of Crestline, Ohio, came down to shake hands with his many friends.

F. W. Giese of Appleton, Wisconsin, a representative of the L. J. Mueller Furnace Company, was busy shaking hands with his many friends.

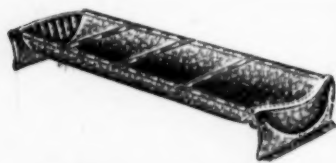
Louis E. Swane had an interesting exhibit of the Culter and Proctor Stove Company of Peoria, Illinois, and he was assisted by Lloyd B. Miller.

Among the visitors were Charles T. Woodward of Carlinville, Illinois, a former President of the National Retail Hardware Association, E. M. Healey, Dubuque, Iowa, A. T. Van Der Doort, Lansing, Michigan.

Will Harms of Rock Island, Illinois, was in charge of the Rock Island Register Company's booth and made an excellent impression upon visitors by his pleasing manners.

#### EMPLOYS NO SOLDER ON HOG TROUGH.

A hog trough made of a single piece of 20-gage galvanized metal from end to end without solder, joints or seams is illustrated herewith, manufactured by the Burlington Manufacturing Company, Burlington, Iowa, and marketed in the Central States by C. R. Vertrees, 97 North Elmwood Street, Peoria, Illinois. The ends of this trough are crimped or



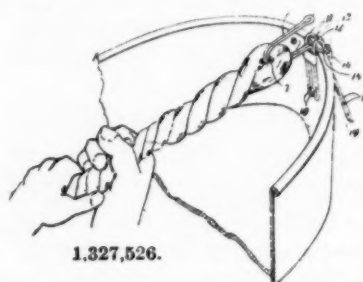
"N. W." Seamless Hog Trough,  
Made by the Burlington Manufacturing Company, Burlington, Iowa.

corrugated as hardware men make eave spouting. The deep corrugations in the 20 gage metal give great strength to the "N. W." Seamless Hog Trough. Having no seams or other joinings, this hog trough is leak-proof. It is guaranteed against damage by freezing. Neither will it rust no matter how damp the weather. This trough does away with all the old trouble of soldering ends breaking off and freezing loose, which has always been a complaint with old-style troughs. Galvanized cross bars every foot,

reinforce the "N. W." Seamless Hog Trough. It is made in all lengths from 1½ feet to 10 feet long. Because of the superiority in metal and construction of the hog trough shown in the illustration herewith, the market for it is large. Consumers will readily recognize its merits. Where it has been introduced sales have been big. Dealers who desire to avail themselves of complete information concerning the "N. W." Seamless Hog Trough should write to C. R. Vertrees, 97 North Elmwood Avenue, Peoria, Illinois.

#### PATENTS WRINGER ATTACHMENTS FOR WASH TUBS.

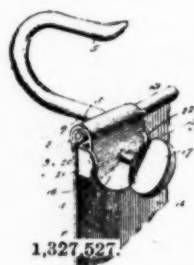
Under numbers 1,327,526 and 1,327,527, United States patent rights have been granted to Claude B. Davis, Richmond, Virginia, assignor of one-half to J. Walter Keeling, Danville, Virginia, for the wringer attachments for tubs, described in the following:



1,327,526.

Number 1,327,526: A wringer attachment for wash tubs comprising a hook having a clamping jaw extending from its stem in a direction away from its bill and a second clamping

jaw pivotally connected with the first jaw for movement into and out of clamping relation thereto and having means for holding it yieldable in clamping relation.



1,327,527.

Number 1,327,527: A wringer attachment comprising a clamp including an inverted U-shaped body for engagement over the beaded upper edge of a wash tub, a U-shaped clamping jaw disposed between the arms of the body below its bend with its ends outturned and slidably embracing the side edges of the outer arm, means for adjusting the jaw toward and away from the inner arm, and a hook carried rigidly by such inner arm to receive an article to be wrung.

#### MAKES LINE OF UNIFORM PRODUCTS.

The composition of Hercules Smokeless Shotgun Powders is said never to vary. This is but one of the many powders and explosives manufactured by the Hercules Powder Company, 1 West 11th Street, Wilmington, Delaware. In the sale of ammunition there is opened to the hardware retailer a profitable field. The American is by nature a sportsman. However, he is apt to become unmindful of the many field sports available in his daily business grind. The hardware dealer who wishes to make the most out of opportunity can derive big profits by calling his community's attention to the oft-neglected recreation. To the merchant who wishes to enlighten himself on the uses of the many varieties of shells and explosives manufactured, or the retailer who desires to get information relative to the handling and sale of these products, should write to the Hercules Powder Company, 1 West 11th Street, Wilmington, Delaware.



## *Window Display Competition Closes with a Final Rush of Entries for Judges' Decision.*

The Frenchman who designs the window displays for the biggest department store in Chicago receives a salary of one hundred thousand dollars a year. As the popular proverb has it, "money talks." In this case it speaks with an unmistakable eloquence. Indeed, no argument could be more convincing. Admittedly, the men in charge of the management of the famous department store referred to are in the front rank of practical authorities on merchandising. As far as it is humanly possible, they have eliminated all guesswork from the operation of their business. They know almost to a penny the value of every selling method and the advantages of every plan for drawing customers to their store. Consequently, the fact that they willingly pay one hundred thousand dollars a year to the designer of their window displays is evidence of the most forceful kind that they consider window displays of immense importance in their system of merchandising.

This reasoning is strengthened by the argument that they certainly would not spend one hundred thousand dollars a year if the same results could be obtained by some other and equally effective method of attracting customers at a smaller cost. These facts and observations are here set forth as having a direct bearing upon AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition which came to a close, February 2, 1920. The first purpose of that contest was to educate hardware retailers and dealers in allied trades to develop the latent possibilities of their store windows and thus increase both the number of their customers and the volume of their sales.

It goes without saying that the making of gainful window displays is not a haphazard matter which can be dealt with in any fashion which happens to strike the fancy of a merchant. In a strict sense, it is a science. It involves some knowledge of lighting effects, optical contrasts, color harmonies, and, most of all, a constant study of human nature. There was a time when the word "psychology" was as meaningless to the average merchant as the term "pathognomonic" or "staphylococcus" or any other tongue-twisting scientific term. But it is no longer strange or puzzling. For want of an easier word to carry the same set of ideas, it has been universally adopted to signify the process of the workings of the human brain. That is to say, it deals with the way thoughts are conceived, impressions received, and emotions aroused or controlled. As applied to the devising of window displays, psychology places sharp emphasis upon the modes of attention. It analyzes how attention is arrested and held to a particular object or group of things. It shows what are the best arrangements of articles to catch the eye of the passer-by and to cause him to pause long enough to inspect the commodities on exhibit.

In hundreds of different ways, the psychology of window displays has been explained in AMERICAN ARTISAN AND HARDWARE RECORD, both before, during and after window display competitions. In effect, a school of window display psychology has been conducted for the benefit of retail merchants. That the instructions given therein have not been neglected or wasted is evident in the photographs of window displays and descriptions thereof entered in the contest which has just closed.

Compared with entries of former years, they disclose a notable improvement in many respects. The past five or six months have been a time of extraordinary activity in the trade. Retailers have been unusually busy. Therefore, while they have probably kept up a high average of achievement in the making up of window displays, many of them did not have the time to spare for getting photographs of their window exhibits. The result was that during the first period of AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition the rate at which entries were made was slow. Toward the end of the contest, however, the rate was increased and the competition closed with a final rush of entries for the judges' decision.

From every angle, the Window Display Competition has been as instructive as it was gratifying to all those who helped make it a success. The utmost care has been taken to insure the most rigid impartiality in the management of the competition. The judges whose decision determines the award of prizes have been selected because of their intimate knowledge of merchandising problems with special reference to thorough understanding of the value and importance of window displays in the retailing of commodities. The three men chosen to pass upon the photographs of window exhibits entered in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition may justly be considered authorities upon the practical matters involved in making and designing of window exhibits.

The manufacturing and distributing phases of hardware are represented in the trio of judges by Irving S. Kemp, Sales Manager of the Vaughan and Bushnell Manufacturing Company, Chicago, Illinois. He is a man of broad culture and keen insight in commercial affairs in general and the hardware industry in particular. He is thoroughly conversant with the requirements of salesmanship and is firmly convinced of the tremendous advantages of the store front windows as silent and tireless salesmen. His acquaintance with retailers and their varying conditions is extensive. He knows their needs not from the theoretical point of view of the man at the desk, but from the practical point of view of actual contact with the dealers and their customers. He is, therefore, thor-

oughly competent to pass judgment upon the selling value of a hardware window exhibit.

Few men are better known or more highly esteemed in the hardware trade of Chicago than Fred Ruhling, owner and active manager of the retail hardware store at 1315 North Clark Street, Chicago, Illinois, which bears his name. Among his customers are many of the richest families along the famous Lake Shore Drive. He has won their patronage and retains it by constant endeavor to improve his service and to increase the attractiveness of his store. He is prominent in the affairs of the Illinois Retail Hardware Association and a tireless worker in furthering organization and cooperation among retail hardware dealers. He brings to the work of deciding the merits of the exhibits entered in the Window Display Competition, experience, skill, and reliable judgment.

Allan J. Coleman, one of the three men who acted as judges in the Window Display Competition, is President of the Hardware Club of Chicago. He has worked his way from small beginnings to a position of honor and influence in the hardware trade. He is a manufacturer and distributor of hardware specialties and his place of business is at 208 North Wabash Avenue, Chicago, Illinois. A volume might be written of his geniality and shrewdness. The fact that he was unanimously elected President of the Hardware Club of Chicago is sufficient indication of his qualifications both for that position and for the task of acting as judge in the AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

The three judges mentioned in the foregoing paragraphs gave plenty of time to the inspection of the photographs and descriptions presented for their decision. Each exhibit was studied on its own merits. The four prize winning photographs were selected after long and careful deliberation.

There were many other window displays among the entries which pleased the judges by the exceptional cleverness of their design, but which fell short of the qualities deemed necessary to win one of the prizes. These displays were, therefore, awarded Honorable Mention and will be reproduced in coming issues of AMERICAN ARTISAN AND HARDWARE RECORD together with the four window displays which won the prizes. Thus, even though the competition itself has been closed, the benefits which it produces will continue to be placed at the service of our readers from week to week in reproductions of the photographs and descriptions together with useful instructions and comments on each particular exhibit.

#### Decision of the Judges.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

It is with unqualified sincerity that we, the undersigned judges, declare that the photographs entered in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, which closed February 2, 1920, were above the average in the evidences of careful planning, artistic designing, and practical pulling power.

In arriving at our decisions, we have the advantage of being wholly free from any bias that might have come from knowing in advance the identity of the

persons who submitted the photographs. We feel, therefore, that our opinion and judgment are unhampered by any suggestion or prejudice whatsoever.

The packages containing the window display photographs and descriptions were giving to us marked with fictitious names. The correct names and addresses of the contestants were held in sealed envelopes which were not opened until after the awards had been decided.

We are glad to take advantage of the opportunity to congratulate AMERICAN ARTISAN AND HARDWARE RECORD upon its enterprise and progressiveness in conducting this Window Display Competition. Your journal is doing a greatly needed and constructive work in educating dealers and retail merchants in the principles of sound and profitable business. By giving them the best methods out of the experience of successful men and in constantly presenting improvements of management and commodities, you are helping them to better their conditions and increase the prosperity of the trade in general.

After scrupulous comparison and analysis, we have agreed to award the cash prizes in the Window Display Competition in the following order:

- First prize, photograph marked "4 A."
- Second prize, photograph marked "11."
- Third prize, photograph marked "22 F."
- Fourth prize, photograph marked "20."

Convinced that we have used our best judgment in the matter, and expressing our pleasure in having had the opportunity to inspect so many praiseworthy exhibits, we are,

Right truly yours,

IRVING S. KEMP,  
FRED RUHLING,  
ALLAN J. COLEMAN.

Chicago, February 3, 1920.

In compliance with the rules and conditions governing the Window Display Competition, the sealed envelopes containing the names and addresses of the contestants were opened after the judges had rendered their decision. It was then found that the following were the prize winners:

First prize, \$50.00 in cash to Charles Byford, care of Mills Hardware Company, 95 Kings Street, East, Hamilton, Ontario, Canada.

Second prize, \$25.00 in cash to Fred Kunter, care of Stebbins Hardware Company, 15 West Van Buren Street, Chicago, Illinois.

Third prize, \$15.00 in cash to Otto J. Gress, care of Bunting Hardware Company, 810 Walnut Street, Kansas City, Missouri.

Fourth prize, \$10.00 in cash to Anton F. Krcma, care of J. J. Stangel Hardware Company, Manitowoc, Wisconsin.

The judges came to an agreement that Special Honorable Mention should be awarded to three photographs which in their opinion were not quite good enough for any of the four prizes, but which nevertheless were of exceptional merit. One of the photographs happens to be one of the six window displays all arranged by the same man, namely, Otto J. Gress, of Bunting Hardware Company, Kansas City, Mis-



souri, who won the third prize. Two other photographs of exhibits prepared by Claude Shelton, Southern Hardware Company, Tulsa, Oklahoma, were also awarded Special Honorable Mention. The following exhibits were found to be above the common run of window displays and to give evidence of talent and designing ability. They were, therefore, deemed worthy of Honorable Mention:

**Honorable Mention.**

C. H. Arcularius, Secretary, Joplin Hardware Company, 624 Main Street, Joplin, Missouri;

Harry T. Brewin, Barker, Rose, and Clinton Company, Elmira, New York;

Otto J. Gress, Bunting Hardware Company, Kansas City, Missouri;

Mario G. Bianche, C. W. Averill and Company, Barre, Vermont;

Charles Byford, Mills Hardware Company, 95 King Street, East, Hamilton, Ontario, Canada;

Howard C. Crabb, Belcher and Loomis Hardware Company, 91 Weybosset Street, Providence, Rhode Island;

Charles E. McMillan, Crisman Hardware Company, 510 Broad Street, Chattanooga, Tennessee;

J. W. Donson, The Irvin, Jewell and Vision Company, 17 East Third Street, Dayton, Ohio;

George C. Franklin, Smith Hardware Company, 175 West First Street, Oswego, New York;

The Edwards and Chamberlin Hardware Company, Kalamazoo, Michigan;

H. W. Goeller, Erie Hardware Company, 1220 State Street, Erie, Pennsylvania;

Edna L. Jenison, Petersen Brothers, Incorporated, 7905 Third Avenue, Brooklyn, New York;

George Hartmann, C. and G. Hartmann Hardware Company, 127 West Third Street, Alton, Illinois;

Carl G. Heinz, 751 Franklin Street, Johnstown, Pennsylvania;

J. C. Kayser, Box 242, Simcoe, Ontario, Canada;

Anton F. Krcma, J. J. Stangel Hardware Company, Manitowoc, Wisconsin;

Philip Leavy, Wallbridge and Company, Buffalo, New York;

A. J. Mohr, 114 South Main Street, Chambersburg, Pennsylvania;

Thomas V. Pickering, Conklin, Tubby and Conklin, Roslyn, Long Island;

Frank Prince, Carlton Hardware Company, Calumet, Michigan;

Claude Shelton, Southern Hardware Company, Tulsa, Oklahoma;

E. A. Saur, 1410 Yale Place, Minneapolis, Minnesota;

Herbert W. Farr, Warner Hardware Company, Minneapolis, Minnesota.

An individual statement was made by each of the three judges as a supplement to the formal report set forth in the preceding paragraphs. Each judge indicates the elements of merit which he deemed to be most necessary to a profitable window display. These statements are instructive and contain suggestions which the retailers may well adopt for the bettering of their window displays.

**Statement of Irving S. Kemp.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

In making up my mind as to the awarding of the prizes, I studied the photographs of the exhibits primarily with the question in my thoughts: "Is it likely that this window display will draw the passer-by into the store by creating in him a desire for any of the goods on exhibit?" I gave full weight to the influence of artistic arrangement in bringing about this practical effect. Originality of design I do not deem



Irving S. Kemp.

essential as the chief reason for making a favorable decision.

However, I am convinced that the arrangement of a display must be of such a nature as to attract attention. Consequently, it should have sufficient individuality to make it stand out from the common run of conventional displays. A passer-by, who is accustomed to seeing a certain type of window exhibit, becomes so familiar with its general aspect that it makes little or no appeal to him.

As a sales manager, I am naturally interested in methods and devices for increasing the volume of sales. Foremost among such agencies is the intelligent and persistent use of the store's display windows. I am convinced that any retailer can enlarge his business gradually and steadily by giving more thought and labor to the planning and making of distinctive sales producing window exhibits.

Yours very truly,

*Irving S. Kemp*

Chicago, February 3, 1920.

**Statement of Fred Ruhling.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

From the point of view of income, the most valuable part of my hardware store are its display windows. I know from experience that the more thought

and care bestowed upon the making of window exhibits the greater are the results in actual dollars and cents. Therefore, in coming to a decision as one of the judges in this Window Display Competition, I have been influenced only by what I estimated to be



Fred Ruhling.

the pulling power of each exhibit as presented through its photograph and description.

I find myself in perfect accord with the other judges respecting this fundamental requirement. The man who does not stop to look at a window display, of course, is in no way affected by it. So far as he is concerned, the display might as well be placed in the lowest level of a coal mine. The exhibits to which I have awarded the cash prizes in perfect agreement with my colleagues are of the sort which not only arouse curiosity, but create and hold interest as well. This, I know to be a fact from my own experience as a retailer. In closing, I desire to say that I was agreeably surprised by the unusual excellence of the exhibits to which we have awarded Honorable Mention.

Very sincerely yours,

Chicago, February 3, 1920.

Statement of Allan J. Coleman.

To AMERICAN ARTISAN AND HARDWARE RECORD:

Display windows are the face of one's store. They attract or repel, stimulate interest or fail to create favorable impressions according to their expression. A dull face in which indifference and stupidity are the only perceptible expression does not draw a glance of approval from others. So it is with the face of a store. If the goods on display in a window are thrown in there haphazardly and without any preconceived plan, the countenance of the store produces no impression and the folk pass it by as they would a blank wall. A good store has a good face. It speaks in the

language of its exhibits to the people who come within visual reach of it. It gains their good will. It tells them that it has things they need at reasonable prices and with friendly service.

In passing judgment on the window displays submitted in this competition, I have applied these tests to the photographs. In my judgment the four exhibits which were awarded in cash prizes measure up to the standard which I have in mind.

I get a lot of satisfaction out of being able to give



Allan J. Coleman.

praise where it is due; and certainly the prize-winning displays as well as the exhibits to which we judges have awarded Honorable Mention deserve to be praised, and the people who design them ought to receive every encouragement because their work is sure to be instructive and beneficial to all your readers.

Right truly yours,

Chicago, February 3, 1920.

#### REGISTERS NEW TRADE-MARK.

A trade-mark bearing the words in Spanish which mean two worlds has been registered in the United States Patent Office, under number 118,341, by the American Steel and Wire Company of New Jersey, Cleveland, Ohio. The goods to which this trade-mark applies are oval fence wire, and wire fencing. Use is claimed for this trade-mark since March 26, 1919. The design is graphic and conveys its meaning with very little effort. It shows two hemispheres on a shield, and no knowledge of Spanish is required to infer that the words running across the spheres signify two worlds.





### CONVENTION OF NEBRASKA HARDWARE DEALERS APPROVES PRIVATE OWNERSHIP OF RAILWAYS.

Beyond controversy, one of the most important factors in determining retail prices is transportation. The cost of distributing goods from the factory to the consumer through the legitimate channels of trade is adversely affected by inadequate shipping facilities, by delays in delivery, and by erroneous tariff classifications. Under government administration, the railroads have not given the service which the business of the country requires. Hence, the sooner the railroads are restored to private management and ownership the better.

This conclusion received strong endorsement in the Nineteenth Annual Convention of the Nebraska Retail Hardware Association, which was held February 3, 4, 5, and 6, 1920, at the Lindel Hotel, Lincoln, Nebraska. More than 500 hardware merchants from various sections of the State were in attendance at the meetings.

Fred W. Ebinger of Plainview, President of the Nebraska Retail Hardware Association, formally opened the Convention at 10 o'clock Tuesday morning, February 3, 1920, in the assembly room of the Lindel Hotel. In an address of welcome to the delegates, Robert M. Joyce conveyed Mayor Miller's offer of the hospitality of the city of Lincoln to the visiting members of the Association.

President Ebinger reviewed the events of the past year in his annual report to the Convention. He indicated what, in his judgment, must be done to improve the conditions of the trade and to promote the interests of the hardware dealers of Nebraska. He urged the members to make greater and more frequent use of numerous helps placed at their disposal by the Association.

He was followed by J. M. Campbell, President of the National Retail Hardware Association who assured Nebraska dealers that their business outlook was of the broadest kind and their opportunities greater in the west than the east. He emphasized that the biggest problem for hardware dealers to meet was that of transportation. He declared that hardware men should do all in their power to aid in getting the railroads back to private ownership, believing that shipping conditions will then improve.

### ISSUES PROGRAM FOR THE ILLINOIS RETAIL HARDWARE CONVENTION.

The observer who casually glances at a new all-steel office building does not perceive at a glance the multiple units of labor and thought and planning which were combined in constructing it. It is only when he consciously directs his mind to a review of the complicated operations necessary for the erection of the complete structure that he gains an idea of the immense amount of labor and talent which were required for its making. On a lesser scale, there is a parity between the structure of the office building and the formulating of an exceptional program such as that which has been arranged for the

Twenty-third Annual Convention of the Illinois Retail Hardware Association, which is to be held February 17, 18, and 19, 1920, in Hotel Sherman, Chicago, Illinois. Every item in the program has been given a place in the schedule of the sessions only after the most careful deliberation and with a view to affording the delegates the highest possible degree of benefit from their attendance. The program in full is as follows:

#### Program of the Twenty-third Annual Convention of the Illinois Retail Hardware Association To Be Held February 17, 18, and 19, 1920, in Hotel Sherman, Chicago, Illinois.

**Tuesday, February 17, 1920.**

9:00 a. m. to 10:00 p. m.—Hardware Exhibit.  
10:30 a. m.—Open Meeting. Short Session of Songs.  
Call to order by H. S. Daniels, President.  
Song, America.  
Invocation by Grand W. Porter.  
President's Message, H. S. Daniels.  
Appointment of Committees on Resolutions, Nominations, Place of Meeting, Legislation, Auditing, and Special.  
Calling together of committees.  
12:00 noon—Adjournment.  
Prompt adjournment and prompt commencement of the Convention sessions will be adhered to, and you will miss much of value if you do not come to the meetings promptly.  
2:00 p. m.—Executive Session. Convention opens promptly. Short session of songs.  
Question Box—In charge of E. B. Moon, Director of Merchant's Service Bureau, Orange Judd Farmer.  
Topic 1—"How to Increase Volume."  
Sales Demonstration, R. L. Sweetnam, Chairman.  
Vacuum Cleaners, H. M. Kelley, Waukegan, Demonstrator.  
Suggestions and discussions on the demonstration.  
Flash Lights, J. W. Thrasher, Macomb, Demonstrator.  
Suggestions and discussions on the demonstration.  
Address—"You and Your Business," by H. P. Sheets, Secretary-Treasurer National Retail Hardware Association.  
Insurance Report Hardware Underwriters.  
4:00 p. m. Annual Meeting of Subscribers at Hardware Underwriters, C. T. Woodward, Chairman Advisory Committee.  
Report and selection of two subscribers for members of Advisory Committee.  
Bring memorandum of your insurance.  
4:30 p. m. Adjournment.  
8:00 p. m. "Get Together" for Ladies, Members, and Exhibitors in Louis XVI Room, Convention Room.  
An unusually enjoyable time was had last year and Chairman Fred Ruhling promises an equally good entertainment this year.

**Wednesday, February 18, 1920.**

8:30 a. m. to 10:00 p. m. Exhibitors in line for you.  
10:00 a. m. Executive Session.  
Short Session of Songs.  
Question Box. In charge of E. B. Moon, Director of Merchant's Service Bureau, Orange Judd Farmer.  
Topic 2—"Methods of Distribution of Hardware Implements and Kindred Lines." Sales Demonstration, R. L. Sweetnam, Chairman.  
Auto Tires, L. W. Sauter, Galesburg, Demonstrator.  
Suggestions and discussions on the demonstration.  
Aluminum Ware, Fred Ruhling, Chicago, Demonstrator.  
Suggestions and discussions on the demonstration.  
Address—John T. Montgomer, Cambridge, Illinois, Farm Adviser, Henry County Farm Bureau.  
12:00 noon. Adjournment.  
Prompt adjournment and prompt commencement of the sessions will be the rule.  
2:00 p. m.  
2:00 p. m. Executive Session.  
Short session of songs.  
Question Box. In charge of E. B. Moon, Director of Merchants' Service Bureau, Orange Judd Farmer.  
Topic 3—"Why Should I Have a Bookkeeper?"  
Address—"The New Order," Matthias Ludlow, Newark, New Jersey, Vice-President National Retail Hardware Association.  
Sales Demonstration, R. L. Sweetnam, Chairman.  
"Coaster Wagons." Volunteer Demonstrator.  
"Oil Stoves," E. R. Sheuey, Villa Grove, Demonstrator.  
Suggestions and discussions on demonstration.  
4:00 Adjournment.  
4:00 Meeting of Committees. See Bulletin Board for Location of Meetings.  
4:00 to 9:00 p. m. Exhibitors' Night.  
9:00 to 12:00. Reception and Informal Dance, Convention Hall, Louis XVI Room.

**Thursday, February 19, 1920.**

8:30 a. m. to 6 p. m. Exhibitors in line for you.  
 10:00 a. m. Executive Session.  
 Short Session of Songs.  
 Question Box. In charge of Mr. E. B. Moon.  
 Topic No. 4—"Store Arrangement and System." Discussions of questions handed in.  
 Address—Professor M. H. Hoffman, Agriculture Engineer, Ames, Iowa.  
 Sales Demonstration, R. L. Sweetnam, Chairman.  
 "Gasolene Engines," Harry Ryan, New Holland, Demonstrator. Suggestions and discussions on the demonstrations.  
 "Tank Heaters," E. E. Voorhees, Blandensville, Demonstrator. Suggestions and discussions on the demonstration.  
 12:00 noon. Adjournment.  
 2:00 p. m. Executive Session.  
 Short Session of Songs.  
 Question Box. In charge of Mr. E. B. Moon.  
 Topic No. 5—"Cash and Credit."  
 3:00 p. m. Report of Committees,  
 Election of Officers.  
 Selection of six delegates,  
 National Hardware Congress at Buffalo, New York, June 22-25, 1920.  
 4:00 p. m. Adjournment.  
 4:15 p. m. Meeting of Board of Directors of Association in Convention Room.  
 4:00 to 6:00 p. m. Meet the Exhibitors.  
 8:00 p. m. Individual Theater Parties.

**LADIES' PROGRAM.****Tuesday, February 17, 1920.**

10:30 a. m. Open Session Convention.  
 2:00 to 5:00 p. m.  
 Informal afternoon at Hardware Club Rooms.  
 Music, Readings, etc.  
 8:00 p. m. "Get Together."  
 Entertainment.

**Wednesday, February 18, 1920.**

Forenoon. Time for shopping.  
 1:30 p. m. Theater party, Cort Theater.  
 7:00 to 9:00 p. m. Inspection Exhibits.  
 9:00 to 12:00 p. m. Reception and Informal Dance.

**Thursday, February 19, 1920.**

Forenoon. Time for shopping.  
 1:15 p. m. Theater party, Riviera Theater, taking busses through Lincoln Park.  
 8:00 p. m. Private Theater Parties.  
 Make up your own party.  
 Mrs. Fred Ruhling, Chairman Ladies' Committee.

The praise and gratitude of the Illinois Retail Hardware Association are due to Fred Ruhling of Chicago, Chairman of the Entertainment Committee for the coming convention. He has worked indefatigably not only upon the arrangements for the entertainment of the delegates and their women folk, but also in helping devise the program and prepare for the housing of the exhibits which are to be a feature of the convention.

**GIVES OUT PROGRAM OF MINNESOTA HARDWARE CONVENTION.**

An especially noteworthy custom has developed among the retail hardware dealers of Minnesota of availing themselves of the benefits of their State University's work in teaching the principles of sound merchandising. Consequently, it is not surprising to find that an entire session has been set aside for instructive addresses from professors of the University of Minnesota during the forthcoming Convention of the Minnesota Retail Hardware Association, which is to be held February 17, 18, and 19, 1920, in St. Paul Auditorium, St. Paul, Minnesota. The program in detail is herewith reproduced.

**Program of the Convention of the Minnesota Retail Hardware Association, To Be Held February 17, 18, and 19, 1920, in St. Paul Auditorium, St. Paul, Minnesota.**

**Tuesday, February 17, 1920.**

10:00 a. m. Executive Board meeting. Convention Hall.  
 1:00 p. m. All members and visiting hardware men should go to Convention Hall and get acquainted with the Executive Board, and register before the Convention opens.

2:00 p. m. Open meeting. Convention Hall. Song, "America"; Invocation; President's Message, F. J. Thielman; Appointment of committees; announcements. Five minutes intermission for congressional delegates to appoint members of the Nominating Committee.

2:30 p. m. Annual Meeting of the Retail Hardware Mutual Fire Insurance Company.

President's Message—Charles F. Ladner.  
 Report of Secretary—Thomas G. McCracken.  
 Report of Treasurer—Henry Hauser.  
 Remarks by Visiting Insurance Secretaries.  
 Question Box.

**Wednesday, February 18, 1920.**

10:00 a. m. Open meeting. Convention Hall.  
 Reports—National Delegate E. P. Babcock, Treasurer H. C. Hertz, Secretary H. O. Roberts, Assistant Secretary D. M. Andrews.

"Our Future Business Men"—Dean G. W. Dowrie, University of Minnesota.

"Better Business Methods"—S. R. Miles, Field Service Manager, National Office.

Question Box.

2 p. m. Open meeting. Convention Hall.

Address by E. B. Moon, Chicago; in charge of Merchants' Service Bureau of the Orange Judd publications, a man who thoroughly understands both retailer and jobber.  
 Question Box.

10:00 p. m. Open meeting. Convention Hall.

Report of Committees: Resolutions, Legislation, Nominating.

**Thursday, February 19, 1920.**

10:00 p. m. Open meeting. Convention Hall.

Report of Committees: Resolutions, Legislation, Nominating.

Election of Officers: Insurance, Association.

Illustrated Chalk Talk: "Road to Happiness"—Curtis M. Johnson, Rush City.

Question Box.

2:00 p. m. Open meeting. Convention Hall.

A big program for retail merchants by Dean R. W. Thatcher and others representing the Agricultural Department of the University of Minnesota.

"Cooperation in Community Development," by Dean R. W. Thatcher.

"Community Service," by Judge F. T. Wilson.

"Labor Saving Devices for the Home," by Miss Adele Koch.

"Better Farm Homes," by William Boss.

**GIVES USEFUL INFORMATION IN NEW SAW CATALOGUE.**

For three hundred years the Atkins Family has been making saws, according to the E. C. Atkins and Company, Incorporated, newly issued Catalogue Number 18. Ever keeping in mind its slogan "Atkins Always Ahead," this company states that it endeavors to place on the market saws which will prove its contention to be more than a mere catch word. Saws of every description are depicted in Catalogue Number 18. The measurements accompanied by illustrations of all the tools listed appear in this catalogue. The descriptions are presented in an easily understandable manner. The illustrations are meaningful and give a graphic view of the actual appearance of the tool pictured. To the hardware dealer this catalogue is indispensable as an aid to the selection of the proper saw for a particular kind of work. Descriptions of power saws for various mill work are also contained in Catalogue Number 18. Atkins saw fitting tools with illustrations picturing their use appear in this catalogue. Small fittings for saws necessary for the repair man are furnished by E. C. Atkins and Company. Exhaustive information pertaining to the ordering and shipping of the articles described in the catalogue is set forth for the aid of prospective purchasers. Other useful information is given in Catalogue Number 18. Dealers who wish to obtain a copy of this catalogue should write to E. C. Atkins and Company, Incorporated, Indianapolis, Indiana.



## NORTH DAKOTA HARDWARE MEN ARE GETTING READY FOR CONVENTION.

An examination of the program prepared for the forthcoming convention of the North Dakota Retail Hardware Association to be held in Grand Forks, North Dakota, February 11, 12, and 13, 1920, shows that much care has been exercised in preparing topics for discussions at the various sessions. In response to the pressure of requests from many of the members more attention is to be paid to Question Box discussion than has been the custom in foregoing meetings of the Association. The schedule of the sessions is herewith appended:

### Program of the Convention of The North Dakota Retail Hardware Association To Be Held February 11, 12, and 13, 1920, in the Council Chamber, City Hall, Grand Forks, North Dakota.

Wednesday, February 11, 1920.

#### Forenoon Session.

From 9:00 a. m. to 12:00 will be occupied reviewing Exhibits in the Auditorium.

Note: There will be an officer of the association located in the Auditorium at all times during the convention (when the building is open for admission), for the purpose of enrolling new members, the receiving of annual dues and the distribution of badges. To secure a badge as well as ticket to Dinner Entertainment it will be necessary to register and to have your 1920 dues paid.

#### Afternoon Session.

In Council Chamber, City Hall.

1:30 p. m. Registration of members; payment of annual dues; distribution of badges.

2:00 p. m. Session called to order by the President.

Song—"America."

Invocation—The Reverend Jonathan Watson.

Address of Welcome—Major H. M. Wheeler.

Response for Association—J. R. Vestre.

Address. R. T. Colse, Duluth, Minnesota, Editor "The Zenith" (a monthly magazine published by Marshall Wells Company, will present the following subjects: "Personal Efficiency," "Great Lakes-St. Lawrence and Ocean Waterway."

Address—Advantages to the Retail Hardware Merchant in Selling "Mechanical Rubber Goods," Mr. G. A. Grauer of the Goodrich Tire and Rubber Company, Akron, Ohio.

Address—"Accounting," R. I. Byington, Commercial Department, Burroughs Adding Machine Company.

Discussion.

Appointment of committees.

The remainder of this session is assigned to the Jobbers, Manufacturers, Traveling Salesmen and Representatives of the Press for general discussion of topics of mutual interest.

#### Evening Session.

7:00 p. m. Exhibit Hall opens. This session to be devoted exclusively to the reviewing of exhibits. Good music to be furnished during the entire evening by Emard's orchestra.

Remember to bring your freight bills for audit. Mark your name on package indicating whether you wish them destroyed or returned after auditing. If this information is not given they will be destroyed.

Thursday, February 12, 1920.

#### Forenoon Session.

This Entire Session Will Be Executive.

In Council Chamber, City Hall.

9:30 a. m. Registration of members; enrollment of new members; payment of annual dues.

10:30 a. m. Songs; President's annual address; Secretary's annual report; report of Treasurer; report of Auditing Committee; report of Delegates to the National Convention, Pittsburgh, Pennsylvania, E. L. Garden, Souris; appointment of additional committees.

Address—"The Service the National Association Is Offering Its Members," S. R. Miles, Field Service Department, National Retail Hardware Association.

Discussion.

The remainder of this session will be devoted to the discussion of question box topics. Question box to be in charge of Question Box Committee.

#### Afternoon and Evening Sessions.

The entire afternoon and evening until 10:00 o'clock will be devoted to the reviewing exhibits.

Exhibit Hall opens at 1:00 o'clock and 7:00 o'clock. Music in the evening will be furnished by Emard's orchestra.

After 10:00 p. m., the Association will entertain its mem-

bers and guests at a Dinner Entertainment. Place will be announced during the convention sessions.

Remember to bring your freight bills for audit. Mark your name on package, indicating whether you wish them destroyed or returned after auditing. If this information is not given they will be destroyed.

Friday, February 13, 1920.

From 9:00 a. m. to 12:00 m. will be devoted to the reviewing of exhibits.

#### Afternoon Session.

Entire Session Will Be Executive.

In Council Chamber, City Hall.

1:30 p. m. Songs.

Question Box Discussion: Criticisms have been made former years that sufficient time had not been allowed for Question Box Discussions. The Program Committee this year decided to assign all or as much of this session as desired for such or other discussions.

Report of committees.

Election of officers.

Adjournment.

Note: At the close of this session the Board of Directors will hold a short meeting.

The Simmons Hardware Company of Minneapolis is most generously presenting to the Association a large seal of the great state of North Dakota, made from several hundred pieces of hardware, to be given at the close of the convention sessions to the most popular hardware man attending the convention. Only those with a membership badge are eligible to vote. Ballot box will be placed in Simmons Hardware Company's Booth No. 56.

Community singing will be a feature of all convention sessions and will be in charge of W. A. Meddaugh, Westhope, North Dakota.

Remember to bring your freight bills for audit. Mark your name on package, indicating whether you wish them destroyed or returned after auditing. If this information is not given they will be destroyed.

## MICHIGAN HARDWARE MEN PUBLISH PROGRAM OF CONVENTION.

The labor problem and the question of selling prices occupy places of prominence on the program of Twenty-sixth Annual Convention of the Michigan Retail Hardware Association, which is to be held February 10, 11, 12, and 13, 1920, in Hotel Pantlind, Grand Rapids, Michigan. The complete program of the sessions is as follows:

### Program of the Twenty-sixth Annual Convention of the Michigan Retail Hardware Association, to Be Held February 10, 11, 12 and 13, 1920, in Hotel Pantlind, Grand Rapids, Michigan.

Monday, February 9, 1920.

8:00 p. m. Meeting of the Executive Committee and Advisory Board at the Hotel Pantlind.

Tuesday, February 10, 1920.

9:00 a. m. The Exhibit Hall will be open in the Klingman Furniture Exhibition Building at the corner of Ottawa Avenue and Lyon Street, with the main entrance on Ottawa Avenue. The office of the Secretary will be located in this building and members should register there upon arrival and secure identification badge, theater ticket, banquet ticket, etc. Clerks will be on hand to receive applications for membership and dues from both Active and Associate Members.

12:00 Noon. The Exhibit Hall will be closed.

1:30 p. m. Retailers, wholesalers, manufacturers, traveling men and ladies are all invited to be present at this meeting.

Meeting called to order in the Assembly Hall in the Hotel Pantlind by President George W. Leedle, of Marshall.

Invocation by Charles M. Alden, Grand Rapids.

Song, "America." Sung by the delegates, led by William Moore, Detroit.

Address of Welcome by the Honorable Christian Gallmeyer, Mayor of Grand Rapids.

Response to Address, J. H. Lee, Muskegon.

Annual Address of President George W. Leedle, Marshall.

Announcement of Committees.

Address, "The Commercial Outlook for 1920,"

Lee H. Bierce, Secretary of the Grand Rapids Association of Commerce.

Song of the delegates.

Address, "Why Ninety Percent of Men Fail,"

Thomas F. L. Henderson, Chicago, Ill.

Remarks by representatives of the Manufacturers, Jobbers and the Press.

Adjournment at 4:00 p. m.

All members appointed for committee work should remain and arrange for meetings of their committees.

- 4:00 p. m. The Exhibit Hall will be open until 6:00 p. m.  
 8:00 p. m. Theater party at the Empress Theater. Exchange tickets will be distributed from the Secretary's office. These must be presented at the theater box office before seven o'clock, Tuesday evening, in exchange for reserve seat coupons.

Wednesday, February 11, 1920.

- 9:00 a. m. Meeting called to order.  
 Opening song by delegates.  
 Address, "Closed vs. Open Shop," E. S. Stebbins, Stanton.  
 Discussion of above subject.  
 Address, "Side-lines for a Country Store," H. M. Coldren, Bellaire.  
 Discussion.  
 Address, "The New Order," Mathias Ludlow, Vice-President of the National Association, Newark, New Jersey.  
 Discussion.  
 Song by the delegates.  
 Address, "New Plan of Handling Binder Twine," Harry L. Hulburt, Warden, Michigan State Prison, Jackson.  
 Discussion.  
 Address, "Marking Your Price Tags," Lee M. Hutchins, Grand Rapids.  
 Discussion.  
 Adjournment at 12 o'clock.  
 1:00 p. m. The Exhibit Hall will be open at this time and will remain so until 6 o'clock.  
 7:30 p. m. Exhibit Hall will be open to the public until 10:30 p. m.  
 7:30 p. m. (Question Box Session for Hardware Dealers only.)  
 Annual Report of Secretary Arthur J. Scott, Marine City.  
 Annual Report of Treasurer William Moore, Detroit.  
 The balance of the evening will be devoted entirely to the "Question Box" in charge of J. H. Lee, Muskegon; John C. Fischer, Ann Arbor, and L. F. Wolf, Mount Clemens.

Thursday, February 12, 1920.

(Open Session, Everybody Invited.)

- 9:00 a. m. Opening song by the delegates.  
 Address, "Getting Business," George W. McCabe, Petoskey.  
 Discussion.  
 Address, "The Cost of Doing Business," Charles L. Meach, Lakeview.  
 Discussion.  
 Address, "Insurance a Service," Leon D. Nish, Elgin, Illinois.  
 Discussion.  
 Song by the delegates.  
 Address, "The Relation of the Traveler to the Retail Merchant," John A. Raymond, Lansing.  
 Discussion.  
 Address, "A Slave to Business," Harry T. Morgan, Detroit.  
 Discussion.  
 Address, "You and Your Business," National Secretary Herbert P. Sheets, Argos, Indiana.  
 Discussion.  
 11:30 p. m. Report of Committee on Nominations.  
 Election of Officers.  
 Adjournment at 12:00 o'clock.  
 1:00 p. m. Exhibit Hall will be open until 6:00. This whole afternoon can be profitably spent by the delegates, visiting the exhibitors. Don't forget the attractive prizes offered in the "Buying" Contest.  
 6:15 p. m. Banquet and entertainment at the Armory. The Jobbers and Manufacturers of Grand Rapids have extended an invitation to the delegates and their ladies to be their guests on this occasion. Delegates will meet in the lobby of the Hotel Pantlind 6:15 sharp and go in a body to the Armory.

Friday, February 13, 1920.

- 8:00 a. m. The Exhibit Hall will be open until 12 o'clock. Don't go away without placing an order with every exhibitor whose line of goods you can use to advantage.  
 (Executive Session for Retail Hardware Dealers Only.)  
 1:30 p. m. Reports of Committees on Constitution and By-laws, Auditing and Resolutions.  
 Consideration of committees' reports.  
 Report of the committee on Next Place of Meeting.

Selection of next Convention City.

Unfinished and new business.

Question Box.

Adjournment.

The new Executive Committee will hold a meeting at the Pantlind Hotel immediately following adjournment.

## SELECTS TOOL METALS WITH CARE AND PRECISION.

Being made of Vanadium Alloy Steel, the Vaughan's Vanadium Nail Hammer, illustrated herewith, made by Vaughan and Bushnell Manufacturing Company, Chicago, Illinois, is tough and strong. Ordinary vanadium does not make the most superior tools. The vanadium alloy steel employed in this product is of the purest grade, declare the manufacturers. In every detail of composition it conforms to a formula which insures its purity as a tool metal. The forging and formation of Vaughan's Vanadium Hammer is executed with the same skill and care which characterizes the selection of the materials used in manufacturing. Every detail of this hammer is produced for a distinctive purpose.

The product as a whole is designed for strength and



Vaughan's Vanadium Nail Hammer, Made by the Vaughan and Bushnell Manufacturing Company, Chicago, Illinois.

service. In a hammer one of these qualities can not be eliminated for the introduction of another. A glance at the illustration herewith will show the firm appearance of the *Non-slip claw* on this hammer. It will firmly grip any nail from brad to spike. No matter how hard the wood, this hammer will withstand the force required to extract the nail. The octagon neck and the round face pattern, noticeable on the Vaughan's Vanadium Nail Hammer, are practical and neat. That this hammer is a tool which any mechanic would be proud to possess will be agreed to by dealers who examine and test it. Write to the Vaughan and Bushnell Manufacturing Company, Chicago, Illinois, for a catalogue and price sheet depicting the entire line of hammers marketed by this company.

## ASSIGNS LAWN MOWER TRADE-MARK.

John Braun and Sons, Philadelphia, Pennsylvania, assignors to Pennsylvania Lawn Mower Works, Philadelphia, Penn-

**NEW DEPARTURE** sylvania, have secured United

97,178.

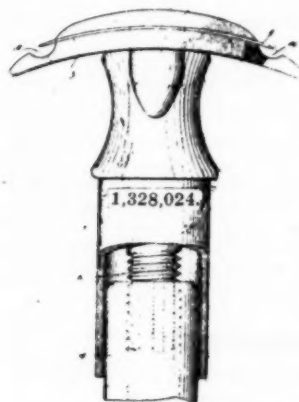
States Patent Office registration for the trade-mark reproduced in the illustration herewith. Its number is 97,178, and it applies to lawn mowers. The registrants claim use for it since September, 1892.

Of course the retailer is indispensable, but the way to convince the public of that fact is through rendering efficient service. Give people service, real service, and they will keep coming to your store.



### PATENTS A SAFETY RAZOR.

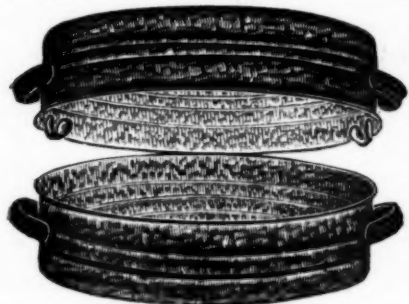
United States patent rights have been obtained by Edward R. Wharton, Medford, Massachusetts, assignor to Gillette Safety Razor Company, Boston, Massachusetts, a corporation of Massachusetts, under number 1,328,024, for a safety razor described herewith:



A safety razor comprising a transversely flexible blade having a longitudinal cutting edge, in combination with a blade holder having a guard, a channel located behind the guard, means for positioning the blade with its cutting edge extending lengthwise over the channel, and means for adjustably flexing the blade transversely.

### HAS HARD, VITREOUS COATING.

Ask any dealer his opinion of Agate Nickel Steel Ware—and most dealers have an opinion of this make of goods—and invariably the reply will be: It is a



Agate Nickel Steel Ware Roasting Pan,  
Made by the Lalance and Grosjean  
Manufacturing Company, Chi-  
cago, Illinois.

dependable line of utensils which gives satisfactory service. The reputation built up by the uniformity of Agate Nickel Steel Ware is extensive. Illustrated herewith, is an Agate Nickel Steel Ware Roasting Pan. It is large and roasts can be properly prepared with it. The handles are strongly attached and no matter what the weight of the fowl or portion to be roasted may be, they will not break off. What distinguishes Agate Nickel Steel Ware from the average make of utensils is the hardness and brittleness of the enamel coating. The fusion point in the application of the enamel on Agate Nickel Steel Ware is not reached until the nickel-steel of which the articles are made is about ready to melt. Thereby is combined the pure, vitreous composition and the metal itself. A perfect union is thus formed which under severe usage will not separate. The enamel adheres firmly to the metal because it is made almost a part of it. Agate Nickel Steel Ware is double coated. It presents a highly polished and beautifully mottled grey surface. The enamel will not chip or crack. For forty years the Lalance and Grosjean Manufacturing Company has been manufacturing Agate Nickel Steel Ware. In the many years that this company has been making enamel ware it has perfected its process of applying the vitreous finish which gives its goods a strong and attractive appearance. The nickel-steel metal used in the manufacture of Agate Nickel Steel Ware is selected because of its fire-resisting properties. United as are the enamel

and the nickel-steel, the action of heat affects neither one nor the other. Sudden heating or cooling will not cause the enamel to chip off. The variety of utensils made of nickel steel and covered by the Lalance and Grosjean process is large. For every household purpose this company manufactures an appropriate utensil. Each article is made in various sizes. A catalogue describing and picturing Agate Nickel Steel Ware can be obtained by writing to the Lalance and Grosjean Manufacturing Company, 1900 South Clark Street, Chicago, Illinois.

### OBITUARY.

Greatness is relative. It varies with the nature of a man's achievements and the character of the things upon which he builds them. Thus a man may be great in astronomy and small in kindness, or great in finance and little in the goodness of heart which makes for fellowship. True greatness is not a matter of fame nor of shekels. It consists rather in the devotion of one's talents to the service of others than in self-seeking. Measured by the good which he accomplished and the evils which he overcame, greatness may rightly be predicated of Edmond Beall, former



Edmond Beall.

Mayor of Alton, Illinois, and State Senator of Illinois, who departed this life January 31, 1920, in Los Angeles, California.

The story of his life is a lesson in character-building and civic loyalty. It is closely identified with the development of the city of Alton, in which he was born, September 27, 1848. His parents were pioneer residents of the city, his father having been born there in 1815. His whole interest was centered in Alton and his love and support of his native city gathered intensity with the passing years. Denied in childhood of the advantages of much of an education, he made a wonderful success against handicaps. In 1860 he began work in the office of the Alton Telegraph. May 12, 1864, before he had reached his sixteenth year, he

enlisted in Company D, 133rd Illinois Volunteer Infantry, being the youngest Union soldier from Alton, Illinois. He served throughout the Civil War and was mustered out of service at Camp Butler, near Springfield, Illinois, September 24, 1865. His last service in the Union Army was that of assisting in the decoration of the old home of Abraham Lincoln.

With a capital of only seventy-five dollars, he began in 1872 to manufacture mining tools. The business is still carried on under the firm name of Beall Brothers, manufacturers coal miners' tools and miners' supplies, Alton, Illinois. He was elected Mayor of Alton in 1905, and served three consecutive terms. Before that, he was elected Alderman from the old Fourth Ward for fourteen successive terms. He was elected State Senator from the Forty-seventh Illinois District in 1910. Again he was elected Mayor of Alton in 1915 for the fourth time. He announced his retirement from public life in 1917. One of the acts of Mr. Beall which attracted nation-wide attention was his building of the Stork's Nest flats in Alton, in which he encouraged people to live who had children. He loved children and considered them an essential part of every good home. He radiated cheerfulness. His optimism was rooted deeply in the very fibers of his nature.

He is survived by his wife, to whom he had been married fifty years; by two daughters, Mrs. L. Caywood and Mrs. Hattie Gill, and three sons, Wesley Beall, Edward H. Beall and Roy Beall.

#### Robert Glendinning.

The end of a successful business career came to the person of Robert Glendinning, President of the Patent Vulcanite Roofing Company, of Chicago, Illinois, who died at his home, 1022 Davis Street, Evanston, Illinois, February 2, 1920. He was born in the north of Ireland, and for several years engaged in the manufacture of asphalt roofing in Belfast Ireland. In 1901 he founded the Patent Vulcanite Roofing Company of Chicago, Illinois, and established branch factories at Kansas City, Missouri, Franklyn, Iowa, Anderson, Indiana, Albany, New York, and San Francisco, California. He was also interested in several other business enterprises. He was favorably known for the soundness of his judgment in commercial affairs and was held in high esteem by his friends and business associates. He is survived by his wife, Augusta J. Glendinning, two daughters, namely, Roberta and Augusta, and two sons, Sidney and Robert Glendinning.

#### Albert Lyman.

Sitting in his plush armchair facing a picture of the Monitor Ozark on which he had served throughout the Civil War, Albert Lyman passed away peacefully February 1, 1920, at his home, 2355 West Lake Street, Chicago, Illinois. He was seventy-eight years of age. For years he had conducted a tinsmith's shop at 2528 West Madison Street, Chicago, Illinois, and was well known among sheet metal workers of the old school. He had had an adventurous career and could tell many exciting stories of skirmishes with blockade runners on the Mississippi during the conflict between the North and the South. He is survived by his wife Louise, who at the time of his demise was seriously

ill of pneumonia, and by his son, A. A. Lyman of 4032 Oakdale Avenue, Chicago, Illinois.

#### Arthur B. Wenink.

At the age of 40 years, Arthur B. Wenink of the Best Register Company, Milwaukee, Wisconsin, died Thursday, February 5, 1920. He will be buried at Forest Home Cemetery, Milwaukee. The services will be under the auspices of the Galilee Commandery Number 38, Knights Templar, of which Mr. Wenink was a member.

For fifteen years he was with the Best Register Company of Milwaukee. Prior to that time he was with his father in connection with the Walworth Run Foundry Company, Cleveland, Ohio. He is survived by his wife, Lillian Wenink, and his four children, Warren, Kendrick, Frances and Jack. His death is deeply felt by his friends, for his manly qualities were widely appreciated.

### PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce, through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

31843.—A firm in Sweden doing an import business desires to secure an agency for the sale of cutlery, hardware, tableware, and inner tubes for bicycles. Reference.

31894.—A commercial agent in Morocco desires to secure the representation of manufacturers and exporters for the sale of galvanized-iron products, hardware, enameled iron, and zinc in sheets, tools, tinplate, etc. Reference.

31900.—Merchants in Scotland desire to purchase acetylene lamps used by miners in coal pits, wire nails, and bar iron and sheets. Quotations should be given c. i. f. Glasgow or Leith. Payment, cash.

31901.—An agency is desired by a business man in Italy for the sale of gas stoves. Correspondence should be in Italian. Reference.

31902.—A firm of manufacturers' agents and importers in Dominican Republic desires to secure agencies for the sale of barbed wire, etc. Quotations should be given f. o. b. New York or c. i. f. destination. Payment, by sight draft or 30 days. References.

31905.—An importer in India desires to secure an agency and purchase aluminum ware, enamel ware, safety razors, hardware, cycles and automobiles, and all accessories and specialties, cutlery, etc. Quotations should be given c. i. f. port in India. Payment, 60 days against documents, in dollars. Reference.

31906.—A manufacturing company in India desires to purchase and secure an agency for abrasives, anvils, and tools of all kinds. Quotations should be given f. o. b. shipping port. Reference.

31914.—A firm in Norway desires to purchase and secure an agency for the sale of automobile accessories. Quotations should be given c. i. f. Norwegian port. Payment through banks in Norway. References.

31915.—A trading company in India desires to purchase and secure agencies for agricultural implements and machinery, hardware, builder's, marine, and miscellaneous; bolts, nuts and rivets, nails and screws; metal ceilings; iron, motorcycles, roofing, shovels, spades, wrenches, and scoops; tools for blacksmiths, carpenters, cabinet makers, machinists, tinsmiths, and wagon builders; wire cloth, wire fencing, and wire netting, etc. Quotations should be given f. o. b. American port or c. i. f. port of India. Reference. Descriptive catalogues and price lists should be forwarded.

31916.—A merchant firm in Mexico desires to purchase for retail trade a line of bicycle accessories, tires. Quotations should be given f. o. b. shipping point. References.

31927.—A commercial agency firm in Spain desires to secure agencies from manufacturers and exporters for the sale of American goods. Correspondence should be in Spanish. References.



31928.—A firm of manufacturers' agents in Spain desires to secure an agency on commission for the sale of hardware in general. Quotations should be given c. i. f. Spanish port. Correspondence should be in Spanish. References.

31917.—A company of merchants in India desires to represent firms on the basis of commissions to organize agencies, and start branches for the sale of metals, hardware, cutlery, etc. Reference.

31918.—A commercial agency firm in Greece desires to represent manufacturers exporting hardware. References.

31919.—A firm of engineers in Peru desires to secure agencies for the sale of nails, wire, bars, tin plate, etc.

### COMING CONVENTIONS.

Iowa Retail Hardware Association, Auditorium, Des Moines, Iowa, February 10, 11, 12 and 13, 1920. A. R. Sale, Secretary, Mason City, Iowa.

Michigan Retail Hardware Association, Hotel Pantlind, Grand Rapids, Michigan, February 10, 11, 12 and 13, 1920. Exhibit in Furniture Exhibition Building. Arthur J. Scott, Secretary, Marine City, Michigan.

Pennsylvania and Atlantic Seaboard Hardware Association, Bellevue Stratford Hotel, Philadelphia, Pennsylvania, February 10, 11, 12, and 13, 1920. Exhibition in Philadelphia Commercial Museum. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh, Pennsylvania.

North Dakota Retail Hardware Association, Grand Forks, North Dakota, February 11, 12 and 13, 1920. Hardware exhibit in Grand Forks Municipal Auditorium. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 17, 18, and 19, 1920. Exhibit in connection. Leon D. Nish, Secretary, Elgin, Illinois.

Minnesota Retail Hardware Association, St. Paul Auditorium, St. Paul, Minnesota, February 17, 18, 19 and 20, 1920. H. O. Roberts, Secretary, 1030 Metropolitan Life Building, Minneapolis, Minnesota.

New York State Retail Hardware Association, Onondaga Hotel, Syracuse, New York, February 17, 18, 19 and 20, 1920. Exhibition in State Armory. John B. Foley, Secretary, 607 City Bank Building, New York City.

Missouri Retail Hardware Association, St. Joseph Auditorium, St. Joseph, Missouri, February 17, 18, and 19, 1920. F. X. Becherer, Secretary, 5136 North Broadway, St. Louis, Missouri.

New England Hardware Dealers' Association, Mechanics' Building, Boston, Massachusetts, February 23, 24, and 25, 1920. George A. Fiel, Secretary, 10 High Street, Boston, Massachusetts.

California Retail Hardware and Implement Association, Palace Hotel, San Francisco, California, February 23, 24, 25, and 26, 1920. Le Roy Smith, Secretary, 112 Market Street, San Francisco, California.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, February 24, 25, 26, and 27, 1920. Exhibit in connection. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Virginia Retail Hardware Association, Murphy's Hotel, Richmond, Virginia, February 25, 26, and 27, 1920. Thomas B. Howell, Secretary, Richmond, Virginia.

Ohio Hardware Association, Hotel Gibson, Cincinnati, Ohio, February 24, 25, 26, and 27, 1920. James B. Carson, Secretary, Dayton, Ohio.

Michigan Sheet Metal Contractors' Association, Saginaw, Michigan, March 2, 3, and 4, 1920. F. E. Ederle, Secretary, Grand Rapids, Michigan.

Master Sheet Metal Contractors' Association of Wisconsin, Milwaukee, Wisconsin, March 17, 1920. Paul L. Biersach, Secretary, 661 Hubbard Street, Milwaukee, Wisconsin.

National Warm Air Heating and Ventilating Association, Cleveland Hotel, Cleveland, Ohio, April 21, 1920. Allen Williams, Secretary, Columbia Building, Columbus, Ohio.

Southeastern Retail Hardware and Implement Association, embracing Alabama, Florida, Tennessee and Georgia State Retail Hardware Associations, Atlanta, Georgia, May 4, 5, 6, and 7, 1920. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta Georgia.

Stove Founders' National Defense Association, Boston, Massachusetts, May 11, 1920. R. W. Sloan, Secretary, 826 Connell Building, Scranton, Pennsylvania.

Hardware Association of the Carolinas, Imperial Hotel, Greenville, South Carolina, May 11, 12, 13, and 14, 1920. T. W. Dixon, Secretary, Charlotte, North Carolina.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. John Donnan, Secretary, Richmond, Virginia.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. F. D. Mitchell, Secretary, 4106 Woolworth Building, New York City.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1920. R. P. Boyd, Secretary, Knoxville, Tennessee.

National Association of Stove Manufacturers, Boston,

Massachusetts, May 12 and 13, 1920. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

National Association of Sheet Metal Contractors, Peoria, Illinois, June 8, 9 and 10, 1920. Edwin L. Seabrook, Secretary, 261 South Fourth Street, Philadelphia, Pennsylvania.

### RETAIL HARDWARE DOINGS.

#### Illinois.

E. W. Sweetman has sold his interest in the Armington Hardware Company at Armington to R. L. Sweetman.

Alexander and Stierwaldt have sold their hardware store at Windsor to Chris Kircher.

#### Kansas.

The Hugoton Hardware Company at Hugoton has been sold to the Western Lumber Company.

C. M. Douglass general store and hardware at Pierceville has been succeeded by Guthrie and Royce.

Sherman Roberts has sold a half interest in his business at Arlington to Mr. Parks of Hutchinson.

The G. C. Davis Hardware firm at Chanute is now G. C. Davis and Son.

Ring and Hill, hardware and implement dealers, have sold their store at Nortonville to S. E. Longworthy.

Mr. B. Johnson has sold his interest in his hardware store at Mond Valley to his son, Frank.

#### Kentucky.

The People's Hardware and Furniture Company at Litchfield has increased its capital stock from \$12,000 to \$18,000.

#### Minnesota.

D. M. Clark, Mal Clark, and J. H. Alderman have sold their interests in the D. M. Clark and Company, hardware and furniture, at Brainerd to J. E. O'Brien.

The Hewitt Hardware Company at Hewitt has been sold to the Bertha Hardware Company.

Luzerne Fager has bought the interest of Mr. Bork in the Parr and Bork hardware and implement business at Madelia.

The Rosewood Hardware and Implement Company has been incorporated at Rosewood by A. H. Holm, F. G. Holm, and N. G. Holm.

#### Missouri.

The Rea-Lucas Implement Company has been chartered at Slater with a capital stock of \$25,000, by Arthur L. Lucas, of Slater.

The firm of Brown Hardware Company at Marceline has been dissolved.

#### Nebraska.

Morgan and Creamer will open a hardware business at Albion.

The Ammon Hardware Company at David City has been succeeded by O. E. Davis.

C. A. Richards has bought a hardware and implement business at Decatur.

#### North Dakota.

J. M. O'Connor has sold his hardware business at Crystal to Gust and Landt.

E. G. Dedrick has sold his hardware store at Langdon to John Howitz.

#### Oklahoma.

R. B. Hill and Company have sold their hardware company at Ardmore to the Mulkey Miller Hardware Company.

The Pritchard Hardware Company at Devol has been sold to F. N. Parris.

West and Stoeffer have bought the Massie Cole Hardware Company at Frederick.

#### South Dakota.

R. Cook and J. Lewis have purchased the H. Wilson Hardware Company at Alpena.

D. W. Cermak and Horbart Payne have bought the Williamson Hardware business at Kinnebec.

Carroll Miller has bought the Listern Hardware Company at Lake Andes.

O. G. Erickson will open a hardware store at Toronto.

#### Tennessee.

Sternberger and Felsenthal, and Davis and Rainey have purchased the hardware and implement stock of the Bain Weddington Company at Brownsville.

#### Texas.

The Evans Koch Hardware Company at El Campo has increased its capital stock from \$25,000 to \$35,000.

Clifton Roper has sold his hardware business at Mt. Pleasant to J. A. Black, Lester Black, and G. A. Mount.

#### Wisconsin.

J. J. Bruss has sold his hardware business at Boyd to the Stanley Supply Company.

Barkley and Washburn have sold their hardware business at Humbird to J. R. Zook.

Hanson Brothers have sold their hardware store at Scandinavia to Weinman and Zwisky.

Paul J. Williams has purchased the interest of C. L. Christensen in the Leader Hardware Store at Waupaca.

# AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

The E. V. B. Manufacturing Company, New Haven, Connecticut, has been incorporated to make automobile hardware, with \$100,000 capital, by W. A. Evans, M. E. Voight, and William Bryan.

## KNOWLEDGE OF REPAIRING ELECTRIC SYSTEMS ON AUTOMOBILES IS VALUABLE TO DEALERS.

One of the most misused parts of the automobile is the electric lighting and starting system. Of this, the battery suffers the most in handling. Such details as the magneto, spark plugs, wiring, etc., are vital in the successful operation of the car. Yet more autoists are ignorant of the proper working of these devices than of almost any other contrivance of their machines. With periodic care, the life of the lighting and ignition systems on automobiles can be extended far beyond the present average. Also, the service derived therefrom can be bettered by timely attention.

Hardware dealers who handle automobile accessories should make it their business to gain some knowledge of the functioning of the electric devices of automobiles. It is the general belief that to master the principles of the working of the electric parts of a machine is difficult. But this is not true. With a little, well-directed study, the hardware retailer can learn the principles of the electrical mechanisms in automobiles. As an aid to furthering his automobile accessory sales this knowledge is indispensable.

In the noteworthy discourse on the repair and care of electric systems and supplies in automobiles, by C. J. Buckwalter, President, Ambu Engineering Institute, appended herewith, is set forth the necessity of the automobile accessory dealer's acquaintance with things electrical on the automobile:

"During the past year dealers and repairmen generally have awakened to the necessity of giving more attention to electrical repairs. For some unknown reason their importance has been overlooked except by big dealers in large centers. But now the small dealer and the garage man in the smaller towns have discovered that they must supplement the large big town shop.

"The best authorities agree that at least seventy-five per cent of the automotive service work today is electrical. Some place the percentage higher. It is certain, however, that the smaller hardware man has learned he must do his own electrical repair work. In order to hold his trade he must be able to handle these electrical troubles which are really more serious to the average owner than the ordinary mechanical repairs, most of which the present day owner can handle himself.

"The electrical repair work has been a little too far advanced for the average shop because mechanics did

not understand fundamental electricity. But the improvement and simplification of electrical testing apparatus have finally enabled the small shop man to do the work as well as his more important city brother. It is true that it has taken a great deal of education to overcome the average repairman's normal fear at anything electrical. He has usually referred the work to some other shop and service station. However, the day of that type is past, because the car owner of the present insists upon getting his electrical work done where that branch is understood.

"From all over the United States the small dealer is showing signs of increased desire for electrical testing instruments, books on electrical subjects and even education along electrical lines.

"The battery shop man is the one who has really been thoroughly awakened to the situation. He now realizes that as all electricity begins with the battery, so all electrical work should start and end with the battery man. And as he is fast fitting himself to take care of all electrical repairs, including battery, starting and lighting and ignition work. The work of showing the battery man his duty along these lines is largely due to educational work on the part of battery makers. Most of the larger companies and all of the more progressive are recommending that their service station, even in the more remote places, take on all branches of automotive electrical work.

"The battery maker has realized that batteries have been misused and misjudged because of careless electrical work which resulted in added strain. Better electrical work will add greatly to its life and endurance. And again the maker knows that with their stations handling all electrical repairs, the owner of the shop will soon become the predominant station in the locality. The owner will not be only better equipped, but a more substantial business man and a better representative of the concern."

## WIRING SYSTEM IS VITAL FACTOR IN AUTOMOBILE MECHANISM.

Dealers in automobile accessories ought to familiarize themselves with the troubles that poor wiring brings about. A great many of the complaints silently borne by the storage battery, the generator starting motor, and lamps are largely traceable to the wiring between these units. The hardware dealer who handles automobile accessories and wishes to make a success of this part of his business must have some knowledge of the wiring system of an automobile. Incidentally, he can sell many automobile supplies which would otherwise have been purchased from the more alert hardware merchant or garage man. To master the general principles governing the functioning of the wiring system of a car is not difficult.



# ADVERTISING CRITICISM AND COMMENT

*Helpful Hints for the Advertisement Writer*

When people are pondering the question of suitable gifts for their friends and relatives, the advertisements appearing in the daily papers are a help to them. Take as an example the advertisement of the T. B. Rayl Company, reproduced herewith from the *Detroit Journal*, Detroit, Michigan. The good arrangement of the items advertised with their prices plainly stated exemplifies this copy as a holiday advertisement. The assortment of gifts shown in the copy under consider-

the forcefulness of both the window display and the advertising copy.

\* \* \*

Advertising is an attractive form of announcing in print. In announcements the first requisite is the elimination of all secondary details. Only matters of vital importance should be stated. In an advertisement the same holds true. In the advertisement of J. S. Randall, Richmond, Illinois, reproduced herewith from the *Richmond Gazette*, the details of the announcement are clear. After reading this advertisement, should the prospective purchaser desire anything in the way of hardware or automobile repairing he is likely to buy from the advertiser—at least, this is true as long as the impression made by the advertisement lasts. To insure a constant awareness of

**Auto Supplies Tools Rayl's Hardware Sporting Goods Aluminum Ware**

<p><b>Sleds</b></p> <p>Sleds that steer—<i>for boys and girls.</i></p> <p><b>\$2.50 to \$15.</b></p> <p>Typewriters, \$1 to \$4</p> <p>Painting Sets, \$3 to \$5</p>	<p><b>Aeroplanes</b></p> <p>Lots of fun for the boys—<b>\$5 to \$10.00</b></p> <p>Meccano, \$1 to \$40</p>	<p><b>Toy Trains</b></p> <p>Electric Motors...\$1.75 to \$10</p> <p>Chercraft Sets...1.50 to 10</p> <p>Steam Engines...1.35 to 25</p>
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**Special—for Only Two Days—Ouija Boards, 75c**

<p><b>Razors</b></p> <p>Give him a good razor for Xmas. Gillette and Auto Strip Razors, \$5.00 to \$50. Terry Razors...\$3 to \$7</p>	<p><b>Wagons</b></p> <p>Have you seen our large display of juvenile vehicles on our 4th floor?</p> <p>Give the Carpenter Stanley Planes</p>	<p><b>Carving Sets</b></p> <p>A high grade 3-piece Carving set, \$3.98.</p> <p>Christmas Usefulness for the home on our second floor.</p>
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**Skates and Shoes—Buy Them Now—Sweaters!**

<p><b>Tire Chains</b></p> <p>Safety first in auto driving. Very low prices on chains—</p> <table style="width: 100%;"> <tr><td>30x3 1/2</td><td>.....\$3.05</td></tr> <tr><td>31x4</td><td>.....3.40</td></tr> <tr><td>32x4</td><td>.....3.50</td></tr> <tr><td>33x4</td><td>.....3.60</td></tr> <tr><td>34x4 1/2</td><td>.....3.85</td></tr> <tr><td>36x4 1/2</td><td>.....4.20</td></tr> </table> <p>Buy them now!</p>	30x3 1/2	.....\$3.05	31x4	.....3.40	32x4	.....3.50	33x4	.....3.60	34x4 1/2	.....3.85	36x4 1/2	.....4.20	<p><b>To the Ladies</b></p> <p>Give your husband, father or brother a good tool box—a welcome Christmas gift. We have a large stock and every mechanic knows Rayl's tool boxes. A small deposit and we will hold for Christmas.</p> <p><b>Ice Creepers</b></p> <p><b>Auto Mirrors</b></p>	<p><b>Snow Shovels</b></p> <p><b>Auto Robes</b></p>
30x3 1/2	.....\$3.05													
31x4	.....3.40													
32x4	.....3.50													
33x4	.....3.60													
34x4 1/2	.....3.85													
36x4 1/2	.....4.20													

Every man and boy wants Tools

Have you seen our large display of Tool Cabinets?

The Boy Mechanic—1,000 things for a boy to do—\$2.00.

**Have You Seen Our Windows? Xmas Gifts for All the Family**

**T. B. Rayl Co.**

*Grand River at Woodward Ave.*

Store Open Till 9 O'clock Saturday Evenings Until Xmas

ation covers the needs of a large number of prospective purchasers. There are toys for the children; useful gifts for the man, and desirable utensils for the housewife. Most men are fond of tools. Even though not mechanics, as a means of recreation they like to do small jobs around the house. To call the attention of the housewife to the fact that tools would make a suitable Christmas gift is a profitable way of advertising. Another praiseworthy detail of the advertisement of the T. B. Rayl Company is the connection of their window displays with the advertisement. At all times this form of publicity is advantageous. Whenever a window display has been arranged notice of it should appear in the store's advertisement. It increases

## General Hardware

**and Auto Repairing.**

That's our business. We are here to give the best possible service to all who need anything in our line.

**J. S. RANDALL**

RICHMOND, ILLINOIS

the fact that J. S. Randall can supply general hardware and auto repairs repeated advertising is necessary. Following the form of copy illustrated herewith it would be well to go into detail in subsequent advertisements. Certain articles should be portrayed. Distinctive advantages of service should be advertised. Special sales at times are stimulants. Larger space should be used in advertising sales than is ordinarily employed. A feature of the J. S. Randall hardware store which is praiseworthy is the fact that it handles automobile accessories and *advertises* them.

\* \* \*

### DO NOT DISCONTINUE ADVERTISING.

It is interesting to note that some of the largest manufacturers continued to advertise during the war period when they could not possibly supply goods. They did this merely because they knew it to be essential to keep their name and purpose before the public. When it was possible to do business again the names of those advertisers were the first to come to the attention of buyers.

\* \* \*

Many a man has been started on the road to prosperity by a little advertising.

# HEATING AND VENTILATING

## SUMMARIZES THE ADVANTAGES AND DISADVANTAGES OF PULVERIZED COAL AS A FUEL.

A subscriber desires to know whether it is practicable to use pulverized coal in warm air heaters by means of a special apparatus now being extensively advertised. In the *Journal of The American Society of Heating and Ventilating Engineers* containing official reports of the Research Bureau appears an exhaustive treatise on *Pulverized Fuel*, by E. R. Knowles, read before the Twenty-sixth Annual Meeting of the American Society of Heating and Ventilating Engineers, held January 27, 28, and 29, 1920, in the Engineering Societies Building, 29 West Thirty-ninth Street, New York City, wherein the author summarizes the advantages and disadvantages of pulverized coal as a fuel in the following words:

1. Low grade and low cost coal can be used;
  2. Complete combustion of fuel to carbon dioxide, eliminating fuel loss in ash;
  3. High efficiency of operation;
  4. Great economy of operation, small number of operators required;
  5. High temperature attained.
- NOTE: Theoretically, with the supply of such an amount of air as will give the oxygen for perfect combustion, a temperature of about 4,500 degrees Fahrenheit is attainable, and by admitting excess air in varying amounts all temperatures from 4,500 degrees Fahrenheit down to 2,500 degrees Fahrenheit are attainable.
6. Saving of fuel due to small amount of excess air required, reducing stack losses;
  7. Ease of fuel regulation;
  8. Close temperature regulation in combustion chamber;
  9. Quick pick up of load;
  10. Smokeless combustion;
  11. Increase in convenience and cleanliness;
  12. Short smoke stacks;
  13. Flexibility of operation, permitting quick adjustment to suit any condition of underload or overload;
  14. Control of character of flame, oxidizing, reducing or neutral;
  15. Quick shut off of fuel in case of accident;
  16. Ability to burn coals of almost any grade in pulverized form, regardless of the percentage of ash.

### Disadvantages of Pulverized Coal as a Fuel.

1. Inability to apply it economically to small warm air heater or boiler installations, due to the present elaborate and costly systems of crushing, drying, pulverizing, distributing, and operating apparatus required, and to the consequent high cost of preparation except for large installations. The

cost of preparation of powdered fuel, including cost of crushing, drying, pulverizing and distributing, cost of power required for operation, labor, upkeep, supplies and overhead charges, depends upon the quantity handled. With plants of a fairly large size this cost averages about 40 to 50 cents per ton, and rapidly increases as the plant diminishes in size;

2. Inability to store powdered fuel. The storage of powdered coal in large or small quantities for any length of time is to be avoided on account of its hygroscopic condition, its tendency to spontaneous combustion and to pack;
  - a. Powdered coal in storage, containing about 0.75 per cent moisture and 1 per cent sulphur will invariably fire within a few days. If the moisture be increased to over 1 per cent and the sulphur to 4 or 5 per cent, spontaneous combustion may occur in 24 hours;
  - b. Owing to the hygroscopic nature of dried pulverized coal, long storage is not desirable. In its normal state powdered coal is light and fluffy; after standing in storage for two or three days, the physical arrangement of the particles is changed and produces a dense packed mass. So dense does the fuel become that one's fingers can not make an impression even to  $\frac{1}{2}$  inch in depth;
  - c. Satisfactorily to meet the conditions of distribution and feeding required by present pulverized coal practice, the coal must be dry and should be kept in motion;
3. Difficulty with present systems of operation of maintaining a homogeneous mixture of fuel dust and air, and of maintaining uniform feeding and a steady ignition during the entire period of operation;
4. Excessive formation of slag and ashes. One of the disturbing factors in the use of powdered coal is the tendency to the excessive formation of slag and ash when low grade fuels or fuels with an ash of low melting point are used. Just as much ash is formed with lump coal as with powdered coal, but the ash from pulverized coal is very fine and there is a tendency for a large amount of this ash to accumulate within the warm air heater and on the boiler tubes, only a small per cent escaping through the stack. When using even a good grade of coal, ash will accumulate and, therefore, a coal of low ash content is always desirable. Where the ash is promptly removed the tendency to slag or cake is minimized.
5. Tendency to fusion and abrasion of fire brick lining of combustion chamber, due to the high temperatures attained. The blow pipe action of the flame of combustion, and the difficulty of



finding economical materials to withstand these conditions. The effects of the pulverized coal flame on the brick work of the warm air heater are not worse than those from similar heat from grate coal or from oil firing; they are minimized with short flame firing and the attendant low velocities. This tendency is largely overcome by using as few burners to a warm air heater as possible, introducing the fuel into the warm air heater as far from the side walls as possible, and at as low an initial velocity as is consistent with attainment of instant and complete combustion, in the shortest possible time.

6. Possibility of explosions. Coal dust, the same as other finely divided carbonaceous materials, is only dangerous when in a suspended state; that is, when surrounded by sufficient air to cause instant deflagration. When confined in a mass in a bin or tube there is very little chance for sufficient air to become thoroughly mixed with the dust to make an explosive mixture. With proper precautions, there is very little danger of exploding powdered coal; the explosion occurs only as a "puff" which is of very little consequence.

Success in the burning of pulverized coal with present systems of operation depends on the strict fulfillment of four main requirements:

1. The coal must be dried so that it contains not over 1 per cent of moisture, not that it can not be economically burned with a certain amount of contained moisture, but because it can not, when moist, be readily pulverized by ball or roll mills or passed through the distribution pipes or conveyors without danger of packing and clogging the pipes, bends and valves and so interfering with the uniform and continuous operation of the combustion apparatus. The difference between 1 per cent moisture and 5 per cent moisture in the pulverized coal will be about 50 British Thermal Units per pound of 12,500 British Thermal Units coal, a mere trifle when compared with the cost of drying the coal to 1 per cent or less.
2. The coal must be pulverized to such a degree of fineness that not less than 85 per cent will pass through a Number 200 mesh screen and not less than 95 per cent through a Number 100 mesh; the finer the degree of pulverization, the more readily will the coal ignite, and the more nearly will it assume the condition of an approximate gas, when thoroughly mixed with air.
3. The coal must be projected into a chamber hot enough to cause instant deflagration.
4. The coal must be supplied with air sufficient to yield the oxygen necessary to burn the carbon of the coal at once to carbon dioxide.

#### WILL MOVE ITS CHICAGO BRANCH.

The Chicago Branch of the Tuttle and Bailey Manufacturing Company of New York, manufacturers of registers, will move April 1, from its location at 225 West Lake Street, Chicago, Illinois, to West Thirty-seventh and Wall Streets, in the well-known central manufacturing district. The new location is

advantageous because of the ample means of transportation in the central manufacturing district. Situated in the very heart of the railroad center of Chicago, this manufacturing district is a very convenient place from which quick shipments can be made.

#### DESCRIBES WARM AIR HEATER LINE IN NEW CIRCULARS.

A set of circulars describing the line of Peerless Warm Air Heaters is being issued by The Peerless Foundry Company, Indianapolis, Indiana. The Peerless

Pipeless Warm Air Heater is pictured and described in one of these circulars. It is interesting to note that the details of construction of this pipeless warm air heater are set forth graphically. An illustration shows how the Peerless Pipeless Warm Air Heater appears when installed. A sectional picture shows its internal and external construction. In the illustration herewith is reproduced a picture of the Peerless



Peerless Pipeless Warm Air Heater, Made by The Peerless Foundry Company, Indianapolis, Indiana.

Pipeless Warm Air Heater which appears in the circular. Another circular depicts the multiple Peerless Warm Air Heater. To a dealer who contemplates handling a line of warm air heaters, both pipeless and regular, the information contained in the circulars mentioned will be enlightening. For copies of the pamphlets being distributed by The Peerless Foundry Company, Indianapolis, Indiana, write direct to that company.

#### NEEDS NO RIVETS, BOLTS OR SCREWS.

The Number 20 Broadway Elbow, illustrated herewith, manufactured by the W. E. Lamneck Company,



Columbus, Ohio, has a simple locking device with which connections can be made tightly without the use of solder, rivets, bolts or screws. When once joined to another pipe this elbow is as secure as if it were

Number 20 Broadway Elbow, Made by part of the section The W. E. Lamneck Company, Columbus, Ohio, to which it has been attached. The dominant features in the warm air heater fittings manufactured by The W. E. Lamneck Company, is their simplicity, rendering installa-

tion comparatively easy. There are no intricate devices on any article manufactured by this company. Lamneck Simplified Fittings have gained a reputation for the speed with which they can be installed and the soundness of their construction. Only such material which experience and test prove to be the best adopted are used in the making of Lamneck Simplified Fittings, declare the manufacturers. Skillful workmanship is employed.

Besides the complete line of warm air heater fittings, The W. E. Lamneck Company carries in stock an exhaustive line of warm air heater installation supplies. This company has the largest stock of Tuttle and Bailey Registers West of New York City. A complete line of Griswold Dampers is always in stock. An asbestos paper of a high quality can be supplied by The W. E. Lamneck Company. Pecora Asbestos Warm Air Heater Cement is a preparation especially manufactured for heat resistance on warm air heater casting. To warm air heater installers this composition is indispensable. Various sized cans of this asbestos cement can be obtained at all times from The W. E. Lamneck Company. Other fittings needed in order properly to complete a warm air heater job can be supplied promptly by this company. A catalogue listing Lamneck Simplified Fittings and the line of warm air heater supplies carried in stock by The W. E. Lamneck Company, Columbus, Ohio, can be obtained by writing to this company.

#### INSURES PROPER FUEL COMBUSTION.

Herewith is illustrated the Cole Pipeless Warm Air Heater, manufactured by the Cole Manufacturing Company, 3250 South Western Avenue, Chicago, Illinois. According to the manufacturers, the pipeless



Cole Pipeless Warm Air Heater, Made by the Cole Manufacturing Company, Chicago, Illinois.

Due to the scientific construction of the dome and the radiator, the heat that is generated is evenly diffused and warms a large volume of air. Particular pains have been taken in the manufacture of the Cole Pipeless Warm Air Heater to prevent the escape of heat into the cellar in which it is installed. The warmed air is directed up through the single register at a rapid rate, declare the manufacturers. This feature can best be seen by noticing the manner in which

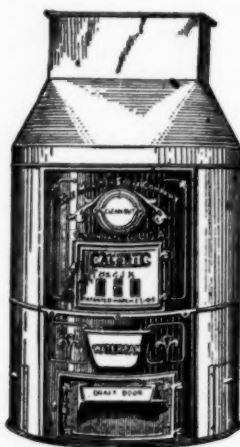
warm air heater shown herewith has an efficient combustion chamber that increases the percentage of the heat produced from the quantity of coal consumed. The all-cast construction of the Cole Pipeless Warm Air Heater is strong. The large grate area in this pipeless warm air heater is an added feature designed to insure its economical operation. Greater means of combustion are provided for by the proper arrangement of the drafts.

the inside casing comes between the cast front and the body of the pipeless warm air heater in the illustration herewith.

Being easy to install, the Cole Pipeless Warm Air Heater requires no great mechanical skill to put up. Only the most simple tools need be employed. The large, roomy ash pit admits of proper cleaning, thereby allowing a sufficient amount of air to circulate to aid in combustion. The fire pot is big and heavily constructed. Other details of construction on this pipeless warm air heater will interest installers. Complete particulars can be obtained by writing to the Cole Manufacturing Company, 3250 South Western Avenue, Chicago, Illinois.

#### AIDS DEALER BY MANY EXTENSIVE ADVERTISING CAMPAIGNS.

The sales on pipeless warm air heaters are increasing rapidly. One of the reasons for the growth of the pipeless warm air heater business is the educational



Caloric Pipeless Warm Air Heater, Made by The Monitor Stove Company, Cincinnati, Ohio.

advertising campaigns carried on by the manufacturers. Conspicuous among those who have conducted extensive publicity campaigns is The Monitor Stove Company, Cincinnati, Ohio. This company makes the Caloric Pipeless Warm Air Heater, illustrated herewith. Throughout the country people have been made acquainted with the trade mark and economical features of this warm air heater. Prospective purchasers have been shown through various mediums the construction of the Caloric Pipeless Warm Air Heater. The advertising copy of the Monitor

Stove Company has always been replete with illustrations showing graphically how the pipeless warm air heater functions. The principles underlying the Caloric Pipeless Warm Air Heater have been set forth in interesting ways. To dealers this publicity is valuable. It prepares the ground for sales. Not only does it create the desire for the pipeless warm air heater, but it instructs the prospective purchaser in the general principles of construction of the heating plant. He knows what he is going to buy. He understands, in a measure, the desirability of certain features. And when the prospective customer comes to the installer and asks to see a sample of the product he saw advertised he has a fair conception of how that heater should appear in actual life. If the pipeless warm air heater meets with the mental standard of an efficient heating plant of the prospective buyer, he will purchase it. Therefore, can be seen the advantage of advertising facts only. That the Monitor Stove Company has followed this practice can be seen from the increasing number of agents handling its pipeless warm air heaters. Installers desiring complete information relative to an agency write to The Monitor Stove Company, 500 Gest Street, Cincinnati, Ohio.

Don't always depend on others for advice.



### TO GIVE ILLUSTRATED LECTURE ON TIMELY SUBJECT AT DINNER AND MEETING.

The Illinois Chapter of the American Society of Heating and Ventilating Engineers will hold its February dinner and meeting on Monday, February 9, 1920, at the Chicago Engineers' Club, 31 South Federal Street, Chicago, Illinois. The dinner will commence at 6:15 p. m. The meeting follows at 7:30 p. m. Members who can not attend the dinner are urged to be present at the meeting. "The Fight for a Smokeless City" is the subject for the meeting and the speaker is Dr. E. Vernon Hill, President of the American Society of Heating and Ventilating Engineers. The lecture will be illustrated by lantern slides. Dr. Hill will be assisted by Henry Misoscow, M. E., Engineer for Smoke Division, Chicago Health Department. The committee in charge of the dinner and meeting is as follows:

F. W. POWERS, Chairman;  
R. M. STACKHOUSE,  
C. F. NEWPORT,  
J. M. STANNARD,  
H. K. LEES.

Concerning Dr. Hill's qualifications to lecture on the subject mentioned the committee says:

"Dr. Hill is our newly elected President of the parent body, and besides this distinction in having a wealth of experience in combating the Smoke Nuisance. He will tell us of methods used in convincing offenders that the city means business and of methods adopted at present for endeavoring to abate the nuisance. Also, he will discuss a new suggestion for the final solution of the smoke problem and reduction of the high cost of fuel, substantiated by data from our government and those abroad."

### HAS SOLID GAS-TIGHT CONSTRUCTION.

In the illustration herewith is shown the Lennox Torrid Zone Steel Warm Air Heater, manufactured by the Lennox Furnace Company, 200 Lincoln Highway, Marshalltown, Iowa. To the customer and dealer



Lennox Torrid Zone Steel Warm Air Heater, Made by the Lennox Furnace Company, Marshalltown, Iowa.

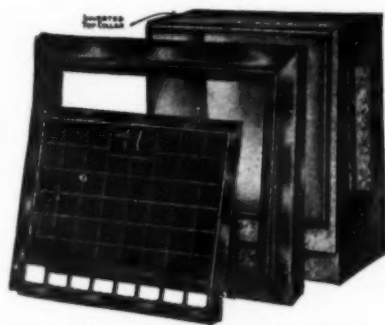
this warm air heater presents a highly satisfactory heating plant. The permanent gas-tight construction and the durability of the Lennox Torrid Zone Steel Warm Air Heater insure its efficiency in heating a home for a long period of time. The combustion chamber of this warm air

heater is an unusually strong compartment. Escape of gas or dust therefrom is impossible, declare the

manufacturers. Also, it is so built that it adequately consumes the gases which are given off from the fuel. Being made from sheet steel the Lennox Torrid Zone Steel Warm Air Heater is a veritable powerhouse of resistance against time and heat. The manner in which the warm air heater, depicted herewith, is riveted is said to prevent the escape of any gas or air. In a warm air heater in order to be strictly healthful this is a most essential feature. According to the manufacturers, the seams are riveted with heavy, forging hammers, and when the parts are once joined in this manner the entire construction is in the nature of one solid piece. There are Lennox Torrid Zone Steel Warm Air Heaters which are still in service after a period of usage extending over twenty years. By writing to The Lennox Furnace Company, 200 Lincoln Highway, Marshalltown, Iowa, dealers will gain information pertaining to the Lennox Torrid Zone Steel Warm Air Heaters which will prove beneficial to them in determining the actual merits of this line of goods.

### PREVENTS WALLS BEING STREAKED.

Registers are a vital part of a warm air heating system. They must properly perform their function in order to add to the sum total of the service necessary to insure comfortable and healthful heating.



Parts of Rock Island Register, Made by the Rock Island Register Company, Rock Island, Illinois.

Not only must registers conform to certain technical rules, but in order to satisfy the house owner they must be neat appearing and in no way disfigure the room in which they are installed.

The Rock Island Register, illustrated herewith, manufactured by the Rock Island Register Company, 1226-30 Fifth Avenue, Rock Island, Illinois, is said not only to be neat in appearance but to prevent the streaking of the walls. This is made possible by an expanding, interlapping, slip-joint connection. The steel frame is placed over the single metal projection on the box and is then fastened to the box. The grill is then inserted in position at the bottom of the frame and pushed back into place. There it automatically expands the single metal projection of the box, extending out between the frame and grill. Then the grill is secured with two large oval bolts, and thus a perfectly tight joint is said to be obtained without any additional labor over the usual connecting operations. The work and time saved by these features are readily apparent to experienced warm air heater installers. For a catalogue completely describing the Rock Island line of Register, write to the Rock Island Register Company, 1220-30 Fifth avenue, Rock Island, Illinois.

Wise businessmen keep out of court. They arbitrate their differences—compromise—they can not afford to quit their work for the sake of getting even. —Elbert Hubbard.

# PRACTICAL HELPS FOR THE TINSMITH

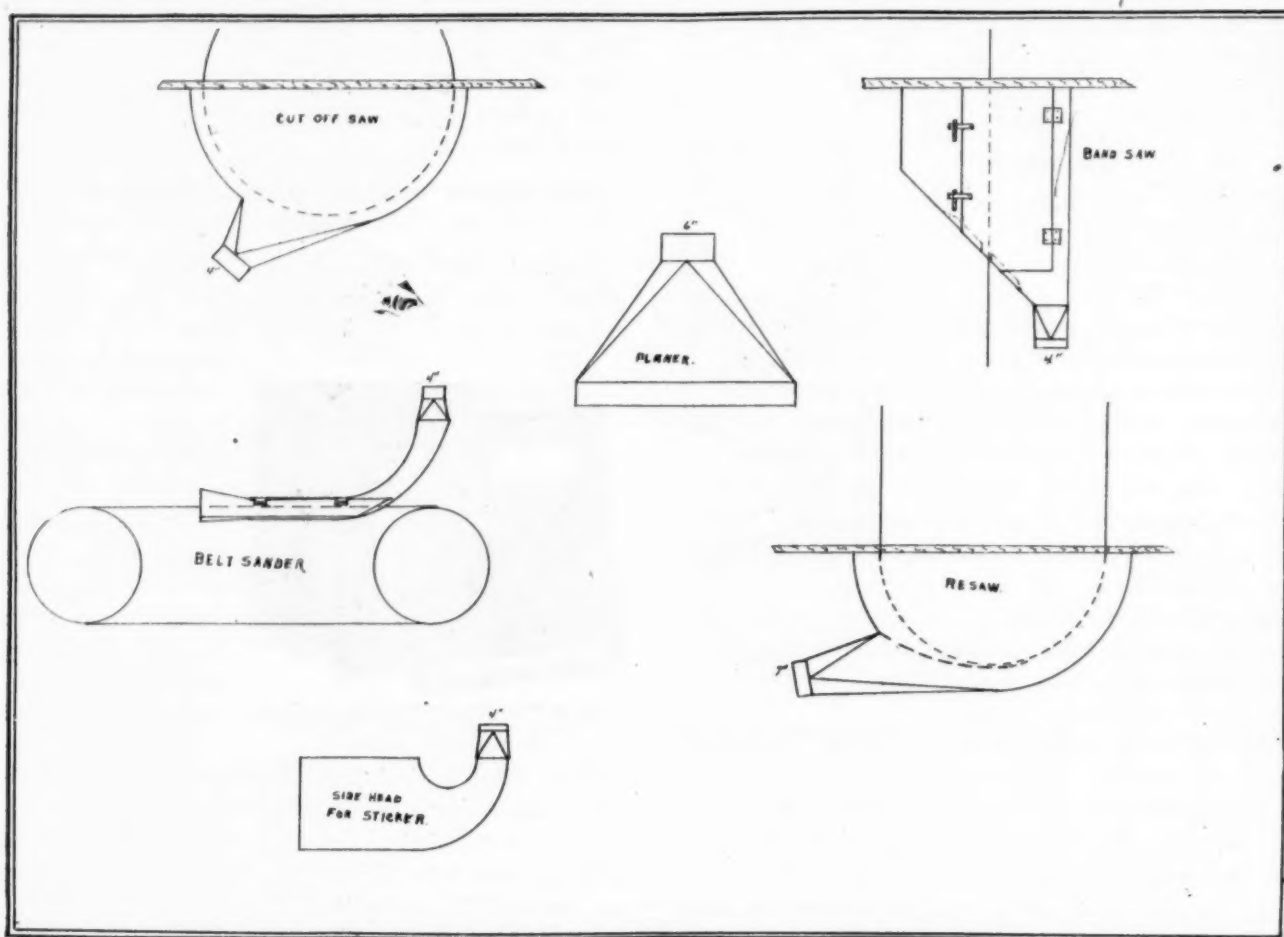
## WOOD WORKING MACHINE HOODS.

By O. W. KOTHE.

The sheet metal worker who installs wood working piping systems or repairs, has a great deal to study. Unfortunately the blow pipe field has gotten so in the last few years that the average workman has not time to consider what he is doing. He does as he is told

about 4 inches wide. For this material for average work a 4-inch pipe is large enough, but for large work as much as 6-inch pipe is required.

Similar investigations must be made of the band saw and re-saw saw hoods. The band saw has a wood block placed in the bottom of hood so the saw will not come in contact with the saw. Observe the angle of re-saw hopper, and it contains a 7-inch pipe.



Wood Working Machine Hoods.

and does that as fast as he is able to force his brains, fingers, back, and legs to move. So many just get a leap in and are out again that only the general outlines are retained in mind. However, here and there are a few men who do not feel it is to their or the craft's interest to work that way, and so ample time is taken to experiment and study conditions on machines.

This policy is necessary because each machine requires a different style of hood, and each machine has its own peculiar action. For instance a cutoff saw; the saw revolves so fast that it gives a velocity to the sawdust almost equal to the suction of a fan. Observations must be taken to note which way the material flies, which is always underneath and with the revolution of the saw. On this angle the hopper is placed on the drum shaped hood. This is generally

This has not the force that the cutoff saw has and so more air is necessary to move the material. Planer hoods are generally made on an incline in the direction in which the chips fly. Some workmen prefer to make an ogee design of hood which better takes care of the material with less resistance. Belt sanders require close watching in order properly to house in the belt and permit the suction to draw all dust off. The sticker machine has four hoods, the side header is here shown.

All these hoods must be designed to suit the flow of material. Never put in mere square boxes as some cheap and irresponsible men do as that soon kills the craft.

Men are never so likely to settle a question rightly as when they discuss it freely and with honesty.



### CONVENTION ARRANGEMENTS ARE MADE AT MEETING OF BOARD OF DIRECTORS.

A meeting of the Board of Directors of the Wisconsin Sheet Metal Contractors' Association was held February 4, 1920, at the Builders' and Traders' Exchange, 456 Broadway, Milwaukee, Wisconsin. Those who were present are as follows:

OTTO GEUSSENHAINER,  
A. SCHUMANN,  
V. S. KUBLY,  
WM. GALLUN,  
JOHN BOGENBERGAR,  
E. B. TONNSEN,  
F. W. DIEDRICH,  
C. W. PANSCH,  
LOUIS HOFFMANN,  
PAUL L. BIRSACH.

A letter from J. B. Wallig, member of the Board of Directors, declaring his inability to appear owing to illness, was read and regrets were expressed because of his absence. Correspondence of considerable length was read and acted upon.

The most important phase of the meeting was the formulation of plans for the coming annual convention of the Wisconsin Sheet Metal Contractors' Association to be held March 17, 1920, at the Hotel Wisconsin, Milwaukee, Wisconsin.

Herewith are appended the arrangements made:

Mr. Otto Geussenhainer will take charge of the Question Box and all those present were requested to file questions appertaining to the sheet metal industry with the secretary for compilation, which are to be turned over to the chairman of this important part of the Convention.

Louis Hoffman was authorized to make the necessary hotel arrangements including the stenographer and banquet, and it was unanimously decided to hold the Convention and make headquarters at the Hotel Wisconsin. The Convention will take place on March 17, will be on all day, with morning and afternoon sessions, within the hours from 9:00 to 12:00 a. m., 2:00 to 5:30 and 7:00 to 9:00 p. m.

The speakers announced for this Convention will be Mr. Stewart Scrimshaw on "Apprenticeship Problems," C. W. Keniston on "Sanitation, Ventilation and Exhaust Systems," and C. W. Pansch will talk on "Business Ethics and Business Burdens."

The local Association will handle matters pertaining to the banquet and entertainment.

### PUBLISHES A COMPLETE TEXT BOOK FOR USE OF MACHINISTS.

Nowadays the average skilled sheet metal worker needs to know something about the machinist's trade as well as his own. In many shops he finds it useful and frequently necessary to grind his own tools, to understand how to restore their temper, and, in general, how to operate and take care of sheet metal machinery. Therefore, the twentieth edition of the *Complete Practical Machinist*, just published, is certain to prove helpful to him. This is a thorough text book

written by Joshu Rose, M. E., and illustrated with 432 engravings. It is written in the language of the workshop and is free from obscure or complicated directions. The instructions cover all kinds of metal-working tools and embrace lathe work, vise and bench work, drills and drilling, taps and dies, hardening and tempering, making and use of tools, etc. Copies of this valuable book can be obtained postage prepaid by sending the price—which is \$3.00 net—to Daniel Stern, Publisher and Bookseller, 620 South Michigan Avenue, Chicago, Illinois.

### COMMITTEES ARE HARD AT WORK ON DETAILS OF MICHIGAN SHEET METAL CONVENTION.

The Convention Committees of the Saginaw Local of the Michigan Sheet Metal Contractors' Association are hard at work making arrangements for receiving and entertaining the delegates to the annual meeting of the State organization as well as perfecting preparations for the exhibits which are to be held in connection with the Convention of the Michigan Sheet Metal Contractors' Association, March 2, 3, and 4, 1920, in Saginaw, Michigan. The personnel of the committees is as follows:

*Reception Committee:* A. Klopf, chairman, W. C. Schroeder, and F. Griffin.

*Entertainment Committee:* A. S. Albright, J. S. Ferguson, and William Lange.

*Exhibits Committee:* A. B. Lewless, chairman, William C. Schroeder, and W. Roberts.

*Finance Committee:* A. F. Martin, chairman, and Arthur Lange.

Preparations are being made for the discussion of practical questions pertaining to the sheet metal business at the coming convention. Particular attention will be paid to warm air heater installation. A special session will be devoted entirely to the consideration of the law regulating installation of warm air heating plants. Speakers will deliver talks on topics of timely interest. Such subjects as "The Labor Problem" and "The Value of the Use of Power Machinery" will be made clear by able speakers.

The Travelers' Auxiliary Association will hold a meeting at the Hotel Bancroft, Wednesday, March 3, at 9 a. m. The close cooperation of this Association is known to all members of The Michigan Sheet Metal Contractors' Association. The entertainment and banquet to be given at Hotel Bancroft Wednesday evening, at 6:30 p. m., by The Travelers' Auxiliary Association will be a source of pleasure to those who participate, as elaborate preparations are planned to entertain the guests.

Herewith is appended the complete program of the Convention:

**Program of the Annual Convention of The Michigan Sheet Metal Contractors' Association, to Be Held March 1, 2, 3, and 4, 1920, in Convention Hall, Auditorium, Saginaw, Michigan.**

**Monday, March 1, 1920.**

7:30 p. m. Meeting of the Executive Board in Secretary's room at Hotel Bancroft.

**Tuesday, March 2, 1920.**

Reception of delegates.

Look for the Yellow Bus, as it will meet all trains and be at your service during the entire Convention.

8:00 a. m. Opening Exhibit Hall. This will remain open until 9:00 p. m.

10:30 a. m. Opening Session.

At Convention Hall, Auditorium.

Address of Welcome by Mayor Ben Mercer.

Response by H. M. Snow, Kalamazoo, Michigan.

Appointment of Special Committees by President.

Adjournment.

2:00 p. m. Warm Air Heater Session.

This session will be devoted entirely to warm air heater problems and a thorough discussion of the new law regulating the installation of warm air heating plants. Ways and means for the enforcement of this law will be advanced and necessary amendments suggested to make it more effective.

Exhibits open to the general public.

9:15 p. m. Saginaw Local will furnish entertainment at the Jeffries Theater, having bought the house for this occasion.

**Wednesday, March 3, 1920.**

9:00 a. m. Executive Session.

(For Active Members only.)

Election of Officers.

Selection of next Convention City.

Reports of Secretary and Treasurer.

General business.

9:30 a. m. Travelers' Auxiliary Meeting at the Hotel Bancroft.

12:00 noon. Exhibit Hall open until 2:00 p. m.

2:00 p. m. General Session.

Ten-minute Talks as follows:

"Apprenticeship," A. M. Basman, Detroit.

"The Value of the Use of Power Machinery," J. A. Temple, Kalamazoo.

"The Labor Problem," A. N. Case, Jackson.

"The Need of a Cost System," R. C. Mahon, Detroit.

"Our Prospects for Obtaining Material in 1920," by representatives of American Rolling Mill Company, Follansbee Brothers, and The Whitaker-Glessner Company.

A general discussion will follow each of these talks.

Awarding of Prizes.

4:00 p. m. Exhibit Hall will be opened and remain open until 6:00 p. m.

6:30 p. m. Banquet and entertainment at the Bancroft Hotel given by the Travelers' Auxiliary Association.

**Thursday, March 4, 1920.**

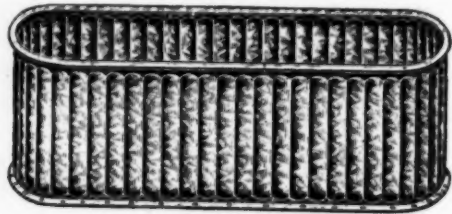
9:00 a. m. Opening Exhibit Hall. This to remain open until the Convention closes.

9:30 a. m. The entire day will be given over to the Saginaw Local Association for blackboard demonstrations on overhead and cost system.

4:00 p. m. Closing of exhibits and close of the Convention.

## MANUFACTURES A STRONG LINE OF CORRUGATED PRODUCTS.

In the first illustration herewith is shown a corrugated stock tank, manufactured by the Northern Corrugating Company, Green Bay, Wisconsin, that has many interesting details of construction. In the first place, it is said to be leak proof. In the second place, no solder is used in the manufacture of this tank. In the third place, being made of a carefully selected corrugated steel it is practically indestructible. The walls of the "Norcor" Round End Stock Tank are securely fastened to the base by a patented process that will prevent all leakage. Instead of solder, the joints are made fast by employing a special packing



"Norcor" Round End Stock Tank, Made by the Northern Corrugating Company, Green Bay, Wisconsin.

and are closely riveted with special galvanized rivets. If through an accident a leak should be started at any point, the packing will swell sufficiently to seal the joint again. The rigidity of the tank depicted here-

with is added to by the heavy flange both at the top and bottom. Twenty-five years of experience in the manufacturing of corrugated sheet metal products enters into the making of each of the tanks bearing the trade-mark "Norcor." Besides the "Norcor" Round End Stock Tank described in the foregoing, the Northern Corrugating Company makes oil tanks, storage tanks, hog troughs, ash cans, and similar articles. Into all the goods manufactured by this company is embodied its long experience and excellent workmanship, plus the patented features.

Shown in the accompanying illustration is the "Norcor" Ridge Roll, made by the Northern Corrugating Company. A nailing flange is supplied in ten



"Norcor" Ridge Roll, Made by the Northern Corrugating Company, Green Bay, Wisconsin.

foot lengths. The galvanized sheet metal used in making this flange is of a high quality and will withstand the active elements of corrosion and rust that are prevalent in positions usually required for the placing of ridge rolls.

A globe finial with double seams is made by this company. The double seam is used to replace solder which has been found to be unreliable in many cases. It is said that there is no danger of the ball falling off of the "Norcor" Double Seam Globe Finial. It is made to fit round or triangular ridging. The Northern Corrugating Company, Green Bay, Wisconsin, manufacture a complete line of sheet metal building products. Write to it for circulars picturing and describing its goods.

## GIVES NEW PHASE OF PITTSBURGH STEEL BASING POINT CASE.

In a recent address delivered before the Inter-Mountain Farmers' Association, Huston Thompson, vice-chairman of the Federal Trade Commission, presented a new phase of the Pittsburgh steel basing point case which is now under consideration by the commission. Sheet metal contractors will be interested in what Mr. Thompson has to say regarding the bearing of the case upon the agricultural sections of the Middle West.

Disclaiming any expression of views, either of himself or of the commission, Mr. Thompson called his audience's attention to the fact that if the commission's action should affect prices, it must be of great interest to his hearers and their fellows. In explaining how the commission's activities do affect the farmers, he said:

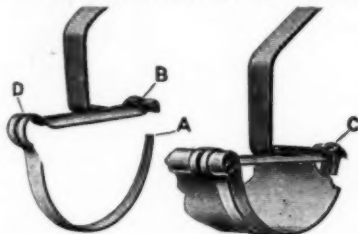
"There is a case before us now which involves what is known as the 'Pittsburgh base steel price' problem. This problem, briefly stated, is that steel products, such as your implements are made of, are sold in Pittsburgh by the United States Steel Corporation at a certain price and the same kind of parts, though manufactured in South Chicago at a price not greater than



at Pittsburgh by the same company, are sold to the purchaser in Chicago at the Pittsburgh price plus an amount equivalent to the freight on the article, which is \$5.40 a ton, from Pittsburgh to Chicago. The Chicago purchaser who fabricates this steel into many forms, declares that this is a discrimination against him to the extent of \$5.40 a ton and, therefore, an unfair advantage to his Pittsburgh competitor. The United States Steel Corporation and others assert that this is not an unfair method of competition and that the situation is controlled by the law of supply and demand, and that if the Pittsburgh base is not maintained there will be an instability of prices, which is bound to affect the market price. The commission has heard the matter brilliantly presented by both sides. After due examination the commission will arrive at a determination as to whether it will dismiss the application or issue a complaint."

### RESISTS INCLEMENCIES OF WEATHER.

When a product must be placed in a position where it meets the forces of weather, more than usual strength must be embodied in it. Eaves trough hangers are placed in a position where they are open to all the vicissitudes of weather. At times, they are



Peerless Eaves Trough Hanger, Made by the Abbott Manufacturing Company, Cleveland, Ohio.

the weak link in an otherwise good piece of trough workmanship. Often has a job of hanging troughs been condemned because the trough hangers were of a poor variety. However, the Peerless Eaves Trough Hanger, illustrated herewith, manufactured by the Abbott Manufacturing Company, 4700 Central Avenue, Southeast, Cleveland, Ohio, is made of metal that will endure under the most terrific wind or weather. It, likewise, will with stand corrosion. When once placed on the trough Peerless Eaves Hangers will hold securely. Note the locking device. To secure this connecting part, pass the strip labeled "A" in the illustration through the slot lettered "B" and clinch. The result is a fastening that will hold no matter how hard the wind blows. Peerless Eaves Trough Hangers are shaped properly to fit standard makes of troughs. They can be had in various sizes. Write to the Abbott Manufacturing Company, 4700 Central Avenue, Southeast, Cleveland, Ohio, for detailed information concerning Peerless Eaves Trough Hangers.

### DELIVERY SERVICE IS ADVANTAGEOUS.

Delivery service where the location of customers demands it, is a very important issue in the successful conduct of retail business. Customers are often lost by the lack of facilities for delivery. Of course, it is an expense. It pays, however. Not only are customers kept, but a new, wider field is opened. Possibilities for business are sometimes doubled. It is like extending the store into another territory.

### NOTES AND QUERIES.

#### Charles Buck Wood Chisels.

From McQuesten Hardware Company, 125 West Second Street, Muscatine, Iowa.

Kindly send us the name and address of the manufacturer of Charles Buck wood chisels.

Ans.—Buck Brothers, Millbury, Massachusetts.

#### Warm Air Heater Patterns.

From N. W. Taplin, 145 Cherry Street, Southeast, Grand Rapids, Michigan.

Please advise where I can purchase warm air heater patterns.

Ans.—Shaw, Welsh and Company, Galesburg, Illinois; Quincy Pattern Company, Quincy, Illinois; Cleveland Castings Pattern Company, Cleveland, Ohio; Vedder Pattern Works, Troy, New York; Cope-Swift Company, Incorporated, 41-49 McDougal Avenue, Detroit, Michigan, and The Newark Stamping and Foundry Company, Newark, Ohio.

#### Incubator Lamps.

From R. E. Wilson, 411 East Jefferson Street.

Can you advise who makes incubator lamps?

Ans.—Kentucky Stamping Company, Louisville, Kentucky.

#### Automobile Fenders.

From Charles H. Conner and Company, Louisville, Kentucky.

We would like to know the name and address of firms in Chicago who make automobile fenders.

Ans.—W. P. Burns Company, 109 North Dearborn Street, and Standard Fender Company, 333 South Clinton Street; both of Chicago, Illinois.

#### Manufacturer of Speco.

From Charles H. Conner and Company, Louisville, Kentucky.

Kindly tell us who manufactures Speco.

Ans.—Special Chemicals Company, Highland Park, Illinois.

#### "Phoenix" Stove.

From J. H. Bedford, Bridgeport, Illinois.

Please give me the address of manufacturer of the Phoenix stove.

Ans.—Butler Brothers, Randolph Street Bridge, Chicago, Illinois.

#### Cotton Hose.

From C. Mack Amspoker, East Liberty, Ohio.

Where can I buy 2½ inch cotton hose rubber lined?

Ans.—Goodyear Rubber Company, 539 Mission Street, San Francisco, California; Mechanical Rubber Company, Cleveland, Ohio; Quaker City Rubber Company, 629 Market Street, Philadelphia, Pennsylvania; Revere Rubber Company, Chelsea, Massachusetts; Dominion Asbestos and Rubber Corporation, 154 Nassau Street, New York City.

#### Feather Renovator.

From F. E. Griffin, 1500 First Avenue, Dodge City, Kansas.

I would like to know the address of a feather renovator.

Ans.—Phillips and Osborne, 709 East Forty-seventh Street, and Phillip Walger, 1455 Belmont Avenue; both of Chicago, Illinois, do feather renovating. The Bushnell Tank Works, Bushnell, Illinois, are manufacturers of feather renovators.

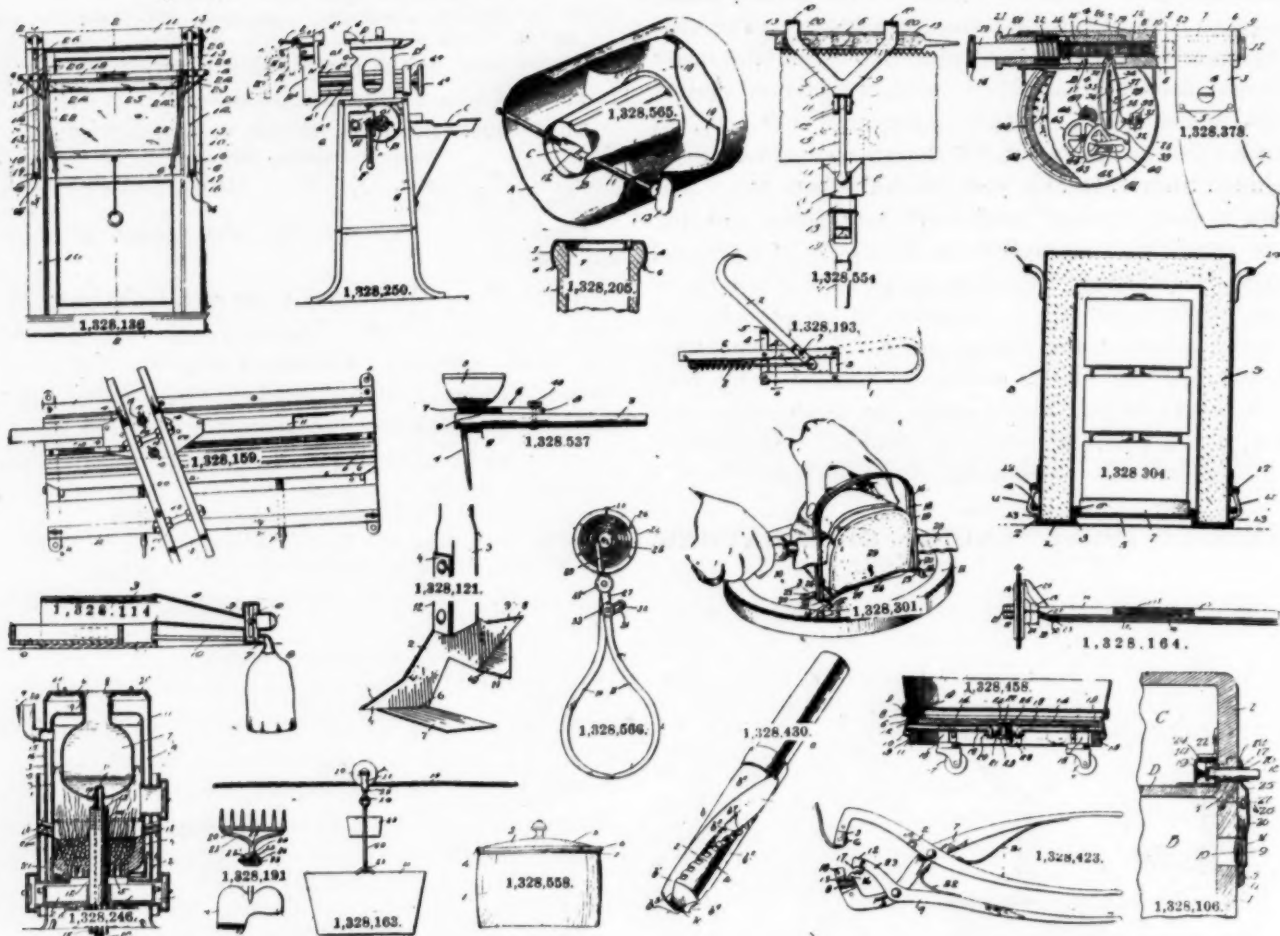
#### Sheet Copper.

From R. E. Tessier, Tessier Sheet Metal Works, 116 Third Avenue, East, Mitchell, South Dakota.

Will you please tell us where we can purchase sheet copper?

Ans.—Merchant and Evans Company, 347 North Sheldon Street; C. G. Hussey and Company, 224 North Jefferson Street; both of Chicago, Illinois.

## NEW PATENTS.



1,328,106. Lock. Ben M. Stone, Chicago, Ill. Filed June 8, 1918.

1,328,114. Flytrap. Alois Bayer and August Klingele, Lorain, Ohio. Filed Mar. 15, 1919.

1,328,121. Soil-Working Implement. Benjamin R. Brown, Kinsley, Kans. Filed Nov. 8, 1918.

1,328,136. Shade and Curtain Hanger. David Joseph Dorsey, Baton Rouge, La. Filed June 17, 1919.

1,328,159. Saw-Filing Device. William H. Kramer, New-castle, Ind. Filed May 31, 1918.

1,328,163. Clothes-Basket Carrier. Frank L. Humphrey, Enid, Okla. Filed April 8, 1919.

1,328,164. Brush Especially Adapted for Cleaning Stovepipes. John Jokisch, Detroit, Mich. Filed Nov. 20, 1918.

1,328,191. Garden-Tool. Eldon L. Peterson, Tacoma, Wash. Filed April 22, 1919.

1,328,193. Spring-Hook. Eugene Pilon, Farmpoint, Ontario, Canada. Filed July 29, 1919.

1,328,205. Bottle-Closure. Frederick W. Schilling, Louisville, Ohio. Filed Jan. 5, 1917.

1,328,246. Heater. Whiting P. Merry, Sharpsville, Pa. Filed Mar. 15, 1919.

1,328,250. Combination Tool. Henry B. Keiper, Lancaster, Pa. Filed Aug. 6, 1919.

1,328,301. Breadboard. Lemuel W. Serrell, New York, N. Y. Filed June 13, 1918.

1,328,304. Fireless Cooker. John L. Snider, Denton, N. C., assignor to Royal Metalware Manufacturing Co., Denton, N. C., a Corporation of North Carolina. Filed June 12, 1919.

1,328,378. Micrometer and Gage Attachment. Frank Maurice Johnson, Denver, Colo. Filed Oct. 11, 1917.

1,328,423. Wire-Binding Tool. Llewellyn Davies, Sisson, Calif. Filed April 1, 1918.

1,328,430. Boring and Slotting Tool. Hosea Hathaway, Brookline, Mass. Filed Nov. 5, 1918.

1,328,458. Bucket. Louis Schiek and William Schiek, Chicago, Ill. Filed Aug. 10, 1917.

1,328,537. Hoe with Knife Attachment. David Neuman, Albany, Ga. Filed Oct. 2, 1919.

1,328,554. Saw Gaging and Setting Tool. Bernard J. Barger, El Paso, Tex. Filed May 1, 1919.

1,328,558. Lid for Saucepans and the Like. Samuel A. Brooks, Elmwood Place, Ohio, assignor of one-half to James M. Shay, Cincinnati, Ohio, and one-half to Alfred W. Miller, Elmwood Place, Ohio. Filed Nov. 19, 1915. Renewed Nov. 4, 1919.

1,328,565. Draft Controller for Smoke Conduits. Lawrence W. Howard, Manchester, N. H. Filed Oct. 7, 1918.

1,328,566. Calipers. George H. Johnston, Apollo, Pa. Filed Jan. 15, 1919.

### LEARN TO KNOW THE SUCCESS FAMILY.

The father of success is work.

The mother of success is ambition.

The oldest son is Common Sense.

Some of the other boys are Perseverance, Honesty, Thoroughness, Foresight, Enthusiasm and Cooperation.

The oldest daughter is Character.

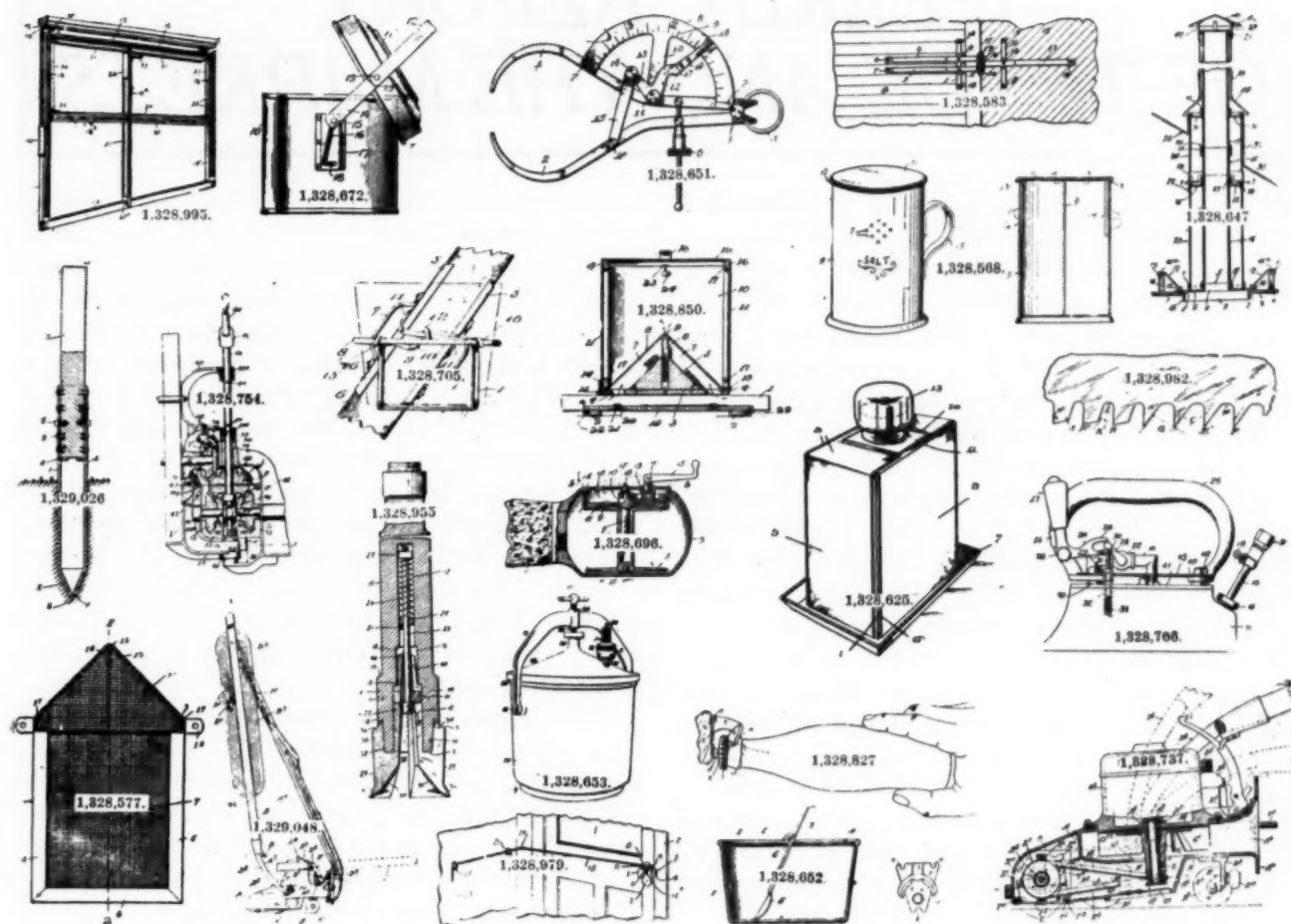
Some of her sisters are Cheerfulness, Loyalty, Courtesy, Care, Economy, Sincerity and Harmony.

The baby is Opportunity.

Get acquainted with the "old man" and you will be able to get along pretty well with all the rest of the family.



## NEW PATENTS.



1,328,568. Salt and Pepper Shaker. Charles Jorgensen, New Orleans, La. Filed Oct. 1, 1919.

1,328,577. Window Screen. Jefferson F. McGeorge, Marshall, Tex. Filed Nov. 19, 1919.

1,328,583. Barn Door Hinge. William J. Niva, Minneapolis, Minn. Filed June 7, 1919.

1,328,625. Refrigerator. James E. Hawkins, Glendale, Calif. Filed Aug. 8, 1919.

1,328,647. Combination Flue. Reinhold Adolph Carl, Elgin, Tex. Filed March 13, 1917.

1,328,651. Calipers. Robert Eames, Detroit, Mich. Filed June 13, 1919.

1,328,652. Pot Lid. Lillie Ehlers, Stickney, S. D. Filed June 7, 1918.

1,328,653. Safety Valve for Pressure Cookers. Walton C. Ferris, Lincoln, Nebr., assignor to National Manufacturing Company, Lincoln, Nebr. Filed April 5, 1919.

1,328,672. Bucket Closure. Isaac Hirsohn, New York, N. Y. Filed March 20, 1917.

1,328,696. Fishing Reel. Joseph I. Smith, The Dalles, Oreg. Filed May 10, 1918.

1,328,705. Holder Attachment for Ladders. Henry Alpen, Hempstead, N. Y. Filed Nov. 23, 1918.

1,328,737. Cleaner. Howard Earl Hoover, Chicago, Ill., assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Filed Oct. 8, 1917.

1,328,754. Removable Wringer Mechanism. Glenn More, Jamestown, N. Y., assignor to Blackstone Manufacturing Company, Jamestown, N. Y., a Corporation of New York. Filed March 17, 1919.

1,328,766. Sadiron. Nathan Rubenstein, New York, N. Y. Filed June 11, 1919.

1,328,827. Bottle Cap Remover. Joseph Eckert, Dayton, Ohio. Filed Sept. 23, 1919.

1,328,850. Flytrap. John W. Skelton, Douglas, Ariz. Filed Aug. 6, 1919.

1,328,955. Under Reamer. Frank A. Haugh, Winfield, Kans. Filed March 10, 1919.

1,328,979. Door Opener. Benjamin Becker, St. Louis, Mo. Filed April 4, 1919.

1,328,982. Hacksaw Blade. Bert L. Calkins, Detroit, Mich. Filed Aug. 30, 1919.

1,328,995. Curtain Stretcher. Alfred Hopkins, Boston, Mass. Filed June 17, 1919.

1,329,026. Post. Daniel H. Snyder, Snyderville, Ohio. Filed June 10, 1918.

1,329,048. Cleaner. Howard Earl Hoover, Chicago, Ill., assignor to Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Filed June 2, 1916.

## INITIATIVE BRINGS WORLD'S PRIZES.

By careful analysis it will always be found that the man who is awarded the world's prizes has, above everything else, initiative. To the man with that quality comes honor, wealth, and distinction.

What is *initiative*? It is doing the right thing without being told.

But next to doing the right thing without being told is to do it when you are told once. That is to say, carry the message to Garcia; those who can carry a message get high honors, but their pay is not always in proportion.

Next, there are those who never do a thing until they are told twice; such get no honors and small pay.

Next, there are those who do the right thing only when necessity kicks them from behind, and these get indifference instead of honors, and a pittance for pay.

This kind spend most of their time in polishing a bench with a hard luck story.

## WEEKLY REPORT OF TRADE AND THE MARKETS

### REPORT OF THE LEADING INTEREST SHOWS SUBSTANTIAL PROFITS IN STEEL INDUSTRY.

The publication of the report of the leading interest for the last quarter of the year, showing results to have been considerably better than generally supposed in that period of strike troubles and the annual report of the leading independent were outstanding features in the trade. The report of the leading independent showed a considerable falling off in gross but the decrease in overhead enabled the corporation to show practically the same net as in the previous year despite the large discrepancy in gross earnings.

The steel trade is greatly interested in the advance of 10 per cent in all day wages granted to employes of the leading interest, although this concern is usually in the vanguard when advances are made. However, it is believed that this action indicates abandonment to some extent of the policy followed by the leading producer of holding firmly to the old schedule of March 21, 1919, in the face of the constant advances made by the independent producers.

The action of the War Department in commandeering steel rails for use of the Railroad Administration has caused considerable comment in the industry as this action opens up a field of limitless possibilities. However, the basis of the deal, that of settling prices later may only mean that this was thought to be the most efficient means of obtaining rails, this viewpoint gaining strength from memory of the wrangle which followed the last inquiry for rails by the administration.

As far as actual production conditions in the industry are concerned, there is little change in this neighborhood, or elsewhere, according to reports received. For one thing the coal question is still a handicap as some mills are bothered by light supplies and the lack of sufficient transportation facilities by the roads is holding this up still further. Incidentally, the same complaint has been coming from Buffalo steadily, where the mills are unable to obtain sufficient coal or to move their finished product when it is finally produced.

#### STEEL.

It is understood that a majority of the steel producers not affiliated with the leading interest are operating on the schedule of January, 1919, allowing prices much better than the March list, although the big producer is still maintaining the lower level. The shortage of sheet bars is holding up some of the sheet mills for supplies. Steel bars are moving as rapidly as supplies can be unearthed and prices generally run  $\frac{1}{2}$  cent per pound above the old nominally list prices.

Advices from all over the country indicate a heavy

building program for the current year and some of this has already started in the Southern districts, where weather conditions make it possible for builders to come ahead of the rush and secure better deliveries than might be possible later on. The lack of enough freight cars is being remarked all over the country and in the Pittsburgh district it is felt through the coal shortage, the inability to move coke supplies as well as finished steel products.

The demand for steel plates and shapes is very broad at the present time and substantial premiums continue to offer for available stocks. This business is mostly domestic in nature at the time being, but it is believed that the early spring months will see a revival of the export business, which will put a further drain on the market.

With wages higher everywhere, manufacturing costs advance automatically, which would eliminate one angle of the argument for lower prices. The independent producers have not been troubled with the same tender feelings for the consumer that has actuated the leading producer and prices have risen merrily, generally by way of extra premiums for deliveries.

One by one the independent steel companies are following the example of the leading interest in advancing wages of day labor, and these advances are generally running at the same rate—10 per cent. Just what effect these advances will have on prices will be hard to tell. The leading interest has maintained the low price schedule, basing the prices on the obvious fact that manufacturing costs have not advanced and that there was no reason for the steel consumer to bear the brunt of higher steel, which was scarce through no fault of his own.

#### COPPER.

The dull condition in the copper market continues unbroken and fluctuations of prices are so narrow they move within a radius of  $\frac{1}{8}$  cent, up or down.

There is hardly any buying of importance, and transactions remain within the routine limits of the every day demand from smaller consumers. The unfavorable situation in the foreign exchange market is actually preventing any new comments for export and copper producers are anxiously waiting for stabilization of exchange.

Summarizing the outlook, a Boston copper market expert says that a notable growth in building activities is reported from all parts of the country. If building continues to expand it will do more than anything else that has happened since the armistice was signed to increase the consumption of copper. Presumably the greater confidence of American consumers, reflected by their heavy purchases of copper recently, is due to this resumption of home building



and factory expansion, which already is making a largely increased demand for their finished products.

The strained financial situation, which has killed the investment market and made it practically impossible to finance, for the time being, hydro-electric and other public utility enterprises, naturally is exerting an influence to retard the growth of copper consumption. For a long time past the difficulty of financing home building exerted a similar influence; but a way at last appears to have been found to carry forward the necessary increase in housing facilities. The high cost of coal is threatening to force a campaign of hydro-electric development.

Surplus stocks of copper in the hands of producers have been reduced approximately 50 per cent. It is altogether improbable, therefore, that there will be any reaction in the price of the metal from this level. The next considerable buying movement, which should make its appearance within four to six weeks, will be pretty sure to carry the price of copper well above 20 cents a pound.

#### TIN.

In spite of a firmer tone in London and Singapore, the domestic tin market has been very irregular, due to resale offerings by profit takers, who daily offered Straits tin 1 cent a pound or more below the cost of importation based on the current London market and Sterling exchange rates.

A decline has taken place in the Chicago market. Pig tin has gone down from 70 cents to 66 cents per pound and bar tin from 71 cents to 68 cents.

#### LEAD.

The St. Louis lead market continues quiet, with most of the producers busy filling their old orders, and little spot business being done. Early in the week the market was easy, but later there was a better inquiry, and prices stiffened somewhat. Local consumers are taking more interest in the market, and the situation shows some improvement. The car situation continues to give the trade considerable trouble, and labor conditions are far from satisfactory. The general industrial situation is improving to such an extent that sellers are more hopeful, and offerings are light. Demand remains mostly in the nearby positions, for which more stocks seem to be available.

#### SOLDER.

A decrease of \$1.00 per hundred pounds has occurred in the Chicago solder market. The prices now in force are: Warranted, 50-50, per pound 38.50 cents; Commercial, 45-55, per pound 36.10 cents; and Plumbers', 33.75 cents per pound.

#### ZINC.

The domestic conditions are not active enough of themselves to help the zinc market much at present, buyers evincing little interest and still confining operations to their immediate wants.

A reminder that some Government stocks still remain unsold is contained in the announcement in this week's bulletin of the Bridgeport Salvage District Board that 3,000,000 pounds of Grade A will be sold

at 10 cents per 100 pounds above the St. Louis price of prime Western, plus freight and war tax to Springfield, Massachusetts.

#### TIN PLATE.

Prices of tin plate have gone up in the Chicago market. First quality bright tin plates IC, 14x20, have increased from \$13.50 per box of 112 sheets to \$14.15. Other sizes and denominations have increased in proportion. Not only are makers of tin plate feeling the effects of the shortage of steel, but plant operations are affected to some extent by the fact that the shortage of cars has caused a considerable accumulation of finished material. With the exhaustion of storage space has come a slowing down of mill activities. Current demands for tin plate are as numerous and insistent as ever, but are getting little attention because all makers already are thoroughly sold out on probable production for the next four or five months.

#### SHEETS.

All grades of sheets are relatively scarce and the tendency of the markets is toward higher prices. The sheet requirements of jobbers and manufacturing consumers seem to have increased further, while the pressure for deliveries has greatly increased, the extra pressure being due to the curtailment in shipments produced by car shortage. Car shortage and slow freight movement are acting upon the sheet situation in two ways, by delaying the delivery of sheet bars, whereby sheet production is curtailed, and by delaying the shipment and movement of sheets when they have been produced.

In the Chicago market, Keystone hammered polished steel sheets have increased from \$9.85 per 100 pounds, on the 28-26 gages, to \$10.50 per 100 pounds; and from \$9.35 to \$10.00 per hundred pounds on the 25.22.

#### OLD METALS.

Wholesale quotations in the Chicago district which may be considered nominal are as follows: Old steel axles, \$33.00 to \$35.00; old iron axles, \$35.00 to \$36.00; steel springs, \$25.00 to \$26.00; No. 1 wrought iron, \$26.00 to \$27.00; No. 1 cast, \$37.00 to \$38.00, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 14½ cents; light brass, 9½ cents; lead, 5½ cents; zinc, 5½ cents; cast aluminum, 24½ cents.

#### PIG IRON.

Great activity is noted in the Middle West. In the Cleveland district alone the total of pig iron sales placed during the past two weeks is estimated conservatively at 250,000 tons. One large maker has sold over 225,000 tons since January 1. The greater part of last week's turnover has been in foundry and malleable grades, and has been spread among large number of consumers, although several heavy single purchases were made. Several automobile casting plants have been heavy buyers. Considerable of the Michigan automobile trade is still to be covered, because of the volume of iron available from regular sources of supply is not sufficient for its needs.







## CRAYONS—See Chalk.

## CUTTERS

<b>Glass.</b>			
Woodward.....	40%		
<b>Meat.</b>			
Enterprise—Nos. 5 10 12			
Each \$2 50 \$4 25 \$3 75			
Nos. 22 32			
" 6 50 8 50			
<b>Pipe.</b>			
Saunders', No. 1 2 3			
Each.....	\$1 85 2 75 6 75		
<b>Slaw and Kraut.</b>			
4-knife Kraut.....	Per doz. \$20 00-55 00		
3-knife Kraut, 8x27 in.	13 00-18 00		
1-knife Slaw.....	2 50		
2-knife Slaw.....	3 00		
Washer.....	11 00		

## DAMPERS, STOVE PIPE.

<b>Ideal.</b>			
3".....	\$1 00		
4".....	1 05		
5".....	1 15		
6".....	1 25		
7".....	2 20		
8".....	3 75		
10".....	6 00		

## DIES AND STOCKS.

Discount.....New List

## DIGGERS.

<b>Post Hole.</b>			
Eureka.....	per doz. \$14 50		
Iwan's Split Handle (Eureka)			
4-ft. Handle.....	15 00		
7-ft. ".....	20 00		
Iwan's Perfection (Atlas) "	16 50		
Iwan's Hercules pattern "	18 00		
See also Augers—Post Hole.			
Dividers, Wing.....	25%		

## DOOR CHECKS—See Checks.

## DOORS, SCREEN.

1-in. 4-panel, painted.....	Net Prices
1 1/2-in. 4-panel, painted.....	"
1 1/2-in. 3-panel, natural pine,	"
fancy.....	"

## DOOR HANGERS—See Hangers.

## DRILLS.

Blacksmiths' Twist. (New List)....40%

## Breast.

Millers Falls No. 12.....	Each, \$46 00
" 112.....	26 00

## Hand.

<b>Goodell's Automatic.</b>			
Nos. 01 03			
Per doz, 12 00 14 40			
Goodell's Single Gear, per doz. 15 75			
Goodell-Pratt No. 4 1/2 per doz.			
list, less.....	30%		
Goodell-Pratt No. 379 per doz.			
list, less.....	30%		
<b>Reciprocating.</b>			
Goodell's.....	per doz 26 00		

## DRIVERS, SCREW.

<b>Standard.....</b>	Nets
Lock Ferrule.....	"
Champion.....	"
Champion Pattern.....	"
Clark's Interchangeable.....	"
Edison.....	"
Reed's Lightning.....	"
Goodell's Spiral.....	"
Yankee Ratchet.....	"
" Spiral.....	"

## EAVES, TROUGH.

65-10% off Standard List.

## ELBOWS—Stove Pipe.

1-piece Corrugated, Uniform.	Doz.	
5-inch.....	\$1 30	
6-inch.....	1 45	
7-inch.....	1 85	
Uniform, Collar Adjustable	Doz.	
5-inch.....	\$1 30	
6-inch.....	1 45	
7-inch.....	1 80	

## ELBOWS—Conductor Pipe.

Galvanized Steel, Tin and Terne.  
Round Corrugated.

<b>Size.</b>	<b>Doz.</b>
2-inch.....	40%
3-inch.....	65%
4-inch.....	65%
5-inch.....	65%
6-inch.....	65%

## EMERY, TURKISH.

<b>Size.</b>	<b>1-lb.</b>	<b>5-lb.</b>	<b>10-lb.</b>
Per pound.....	18c	14c	13c

## EYES.

Bright Wire Screw—See Ooods, B. W.

Drifting Pick.....60, 10&amp;5%

## Hooks and Eyes—

Brass, 1 1/2" No. 60.....	per gross, \$3 50
Iron " " 50.....	" 1 60

## FASTENERS, STORM SASH.

Shroeder's.....	per doz. \$1 50
Sensible.....	" 3 00

## FILES AND RASPS.

<b>Delta</b>		
Della.....	30%	
Swiss.....	List plus 25%	
Utility.....	" net.	

## Nicholson's—

American.....	60%
Arcade.....	50-10-7 1/4%
Black Diamond.....	50&5%
Eagle.....	50-10-7 1/4%
Great Western.....	50-10-7 1/4%
Kearney & Foot.....	50-10-7 1/4%
McClellan.....	50-10-7 1/4%
Nicholson brand.....	50&7 1/4%
J. Barton Smith.....	50&2 1/4%
X-F Swiss Pattern.....	Net list.

Simonds'.....	50%
Diaston's.....	50&10%
Heller's.....	60&10%

## FORKS.

Barley.  
Steel, new list.....New Prices

<b>Hay.</b>			
2-tine.....	New prices		
3- ".....	New prices		
4- ".....	New prices		
Digging.....	New prices		
Scoop.....	New prices		

## Header.

3-tine.....	New prices
4- ".....	New prices
<b>Manure.</b>	
4-tine.....	New prices

## FREEZERS—ICE CREAM.

<b>White Mountain</b>	1-quart.....	@
" " 2 ".....	" @	
" " 4 ".....	" @	
" " 6 ".....	" @	
<b>Arctic.....</b>	1 ".....	@
" " 2 ".....	" @	
" " 4 ".....	" @	
" " 6 ".....	" @	

## GAUGES.

<b>Cream Pail.</b>		
Fairmount.....	per doz. \$3 75	
Marking, Mortise, etc.....		
<b>Wire.</b>		
Disston's.....	25%	

## GIMLETS.

Discount.....35@40%

## GLUE.

<b>Bulk.</b>		
B Amber.....	per lb. 35c	
A White.....	" 40c	
H. S. Amber.....	" 32c	

## Liquid.

Army & Navy.....	40%
Le Page's—	
List "A".....	37 1/4%
List "B".....	33 1/4%
List "C".....	25 %

## GREASE, AXLE.

<b>Wood Boxes.</b>		
Frazer's.....	per gro. \$13 00	
Hub Lightning.....	7 50	

## Wood Pails.

Frazer's, 15lb.\$1.00; 25 lb. \$1.50 each  
Hub Lightning, 15 lb. 90c; 25 lb  
\$1.21 each.

## Tin Cans.

<b>Frazer's</b>		
1 1/2 lb. per doz.....	\$1 75	
3 lb. per doz.....	3 25	

## GRINDSTONES.

<b>Family.</b>				
Inches..	7	8	10	12
Per doz.....	20 50	21 75	26 25	30 50

## Loose.

Per ton.....Price on application

## Mounted.

<b>Ball Bearing.....</b>	1	2	3
Each.....	\$4 75	5 00	5 25

## GUN WADS.

(See Ammunition).

## GUNS.

<b>Iver Johnson Champion Single</b>		
Barrel Shot Guns.....	Net Prices	
Double Barrel, Hammerless	"	

## HAPTS, AWL.

<b>Brad.</b>		
Common.....	per doz. \$0 35	

## Peg.

Patent, plain top.....	" 80
Patent, leather top.....	" 90

## Sewing.

Common.....	" 24
Patent.....	" 55

## HAMMERS, HANDLED.

<b>Blacksmiths, Hand, No. 0, 26 oz.</b>	per doz., net \$11 11
Engineers', No. 1, 26 oz.....	11 11
Farmers', No. 6, 7 oz.....	7 23
Machinists', No. 1, 7 oz.....	6 65

## Nail.

<b>Vanadium, No. 4 1/2, 16 oz.,</b>		
per doz.....	\$17 50	
V. B. No. 11 1/2, 16 oz. per doz.	13 95	
Garden City, No. 11 1/2, 16		
oz., per doz.....	11 90	
Tinner's Riveting, No. 1, 8 oz.,		
per doz.....	9 40	
Shoe, Steel, No. 1, 13 oz. per doz.	10 00	

## Tack.

<b>Magnetic.</b>		
Per doz.....	\$5 63	

## HAMMERS, HEAVY.

<b>Heavy Hammers and Sledges.</b>		
Under 5 lbs.....	50%	
5 lbs. and over.....	50&10%	

## Masons'.

Single and Double Face.....50%

## HANDLES.

<b>Auger.</b>		
Common Assorted.....	per doz. \$0 75	
Pratt's Adjustable, Nos. 1 & 2,		
per doz.....	6 00	
Ives' Adjustable.....	per set, 1 35	
Axe.....	30%	

## Chisel.

<b>Hickory, Tanged, Firmer, Assorted,</b>		
55c; Large, 85c per doz.		
Hickory, Socket Firmer, Assorted,		
70c; Large size, 80c per doz.		

## Coil Pick.

40%

## Drifting Pick.

40%

## File, assorted, 30c; Large, 35c per doz

## Hammer.

<b>Adze Eye.....</b>	per doz. 40 to \$1 00
Blacksmiths'.....	45c@1 00
Machinists'.....	50c@1 00

## Hay and Manure Fork.....25%

## Screw Driver.

<b>Assorted.....</b>	" 60
Large.....	" 90
Shovel and Spade.....	25%

## HANGERS.

<b>Barn Door.</b>		
U. S. Rolled Bearing.....	12 1/4%	
Matchless.....	12 1/4%	
Warehouse Tandem, No. 44.....	33 1/4%	

## Conductor P.

Iwan's Perfection.....45%

## Eave Trough.

<b>All sizes, 5" or smaller,</b>		
.....per gross.	\$3 80 Net	
<b>All sizes, larger than 5",</b>		
.....per gross.	5 00 "	

## Garage Door.

<b>Right Angle.....</b>	50&10%
Sliding Folding.....	30%
Receding.....	50%

## Parlor Door.

<b>Acme.....</b>	per set, \$3 75
Ives' Improved.....	" 3 40
Lane's Standard.....	" 3 50
Lane's New Model.....	" 3 10
Le Roy Noiseless.....	40&10%
Richards.....	25%
Advance.....	40&10%

## HASPS.

Hinge, Wrought.....Add 50% to list.  
With Staples—See Staples.

## HATCHETS.

<b>Crescent.....</b>	50%
Cast Claw.....	per doz. \$1 50@1 85
Cast Shingling.....	" 1 50@1 85
Germantown.....	7 1/4%

## HAY KNIVES.

See Knives.

## HAY RACK BRACKETS

<b>Wenzleman's No. 1 per doz. sets,</b>	\$18 00
Wenzleman's No. 2 " " "	19 20

## HINGES.

<b>Blind.</b>		
Clark's Gravity		
No. 1.....	per doz. sets, \$2 25	
No. 3.....	" " " 5 75	

## Gate.

<b>Clark's.....</b>	2	3
Hgs & Lch, doz.	\$5 50	7 00 9 75
Hinges only " "	4 75	5 50 8, 00
Latches only.	1 90	1 90

## Screen Door.

<b>Cast Iron.....</b>	gross \$10 00
Steel.....	" 7 00

## Spring.

<b>Chicago.....</b>	Add 12 1/4% to list.
Columbia Dbl. Acting.....	40&10&5%
Gem.....	25%
Ideal Detachable.....	per gro. \$11 00
Matchless.....	40%
New Idea.....	per gro. \$7 20
Oxford.....	20%

## Wrought Iron.

New Lists.....	
Light Strap Hinges.....	5&5%
Heavy Strap Hinges.....	20&7 1/4%
Light T Hinges.....	List plus 5%
Heavy T Hinges.....	List plus 45%
Extra Heavy T Hinges.....	15&5%

## Screw Hook and Strap.

<b>6 to 12 in.....</b>	per 100 lbs. \$7 75
14 to 20 in.....	" 7 50
22 to 36 in.....	" 7 25

## Screw Hook and Eye.

<b>1 in.....</b>	per doz. pair \$2 60
1 1/2 in.....	" 3 50
2 in.....	" 5 00

## HOES.

Garden.....Net

## Grub.

<b>Extra.....</b>	New prices
Hazel.....	per doz. New prices
Ladies' and Boys'.....	New prices
Mortar.....	New prices
Planter's Eye.....	New prices
Weed.....	New prices

## HOOKS.

<b>Awning, No. 60.....</b>	per gro 50%
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## Belt.

<b>Brown's.....</b>	70&5%
Jones'.....	65&5%



<b>Box.</b> Inch..... 3 7 10 12 Per doz...\$2 50 2 75 3 25 3 85	<b>Standard.</b> Nos..... 1 2 Each.....\$0 60 1 00 R-W Big Lift.....40% Tiger.....40%	<b>BRICKS.</b> per crate, 42c	<b>See Pullers.</b>
<b>Bush.</b> Common Axe Handle, per doz.\$22 00	<b>KETTLES.</b> Brass.....15% Cauldron.....40% Copper.....per lb. 27 Maslin.....40% Sugar.....50%	<b>LOCKS.</b> <b>Barn Door.</b> No. 60 Stearns.....per doz. \$10 00 No. 80 "....." 17 50	<b>NAIL SETS.</b> See Sets.
<b>Chain.</b> Inch. 1/2 3/4 1 1 1/4 1 1/2 Pr 100 \$7 60-8 10 9 75 11 50 12 60	<b>KNIVES.</b> <b>Best Topping.</b> Clyde, 9-in. Scimitar Blade, dz. \$3 85 California.....3 40 Butcher.....Per doz. Beechwood Handles, 6" blade..\$4 00 " 7" " 4 65 " 8" " 5 65 Cooper's Hoop.....15%	<b>MACHINES.</b> <b>Riveting.</b> Stearns No. 1.....per doz. \$12 00 <b>Tenoning.</b> No. 50 Peace's Spoke.....each \$11 50	<b>NETTING, POULTRY.</b> Galvanized before weaving.....30% Galvanized after weaving.....45%
<b>Clothes Line.</b> Japanned.....per doz.48c @ 1 40 Galvanized....." 75c@2 50	<b>Corn.</b> Common, riveted, painted red.....per doz. Nets Little Giant....."	<b>MAIL BOXES.</b> See Boxes.	<b>NIPPERS.</b> <b>End Cutting.</b> Stubb's Pattern, Inches. 3 6 Per dozen.....\$4 65 6 75 <b>End and Diagonal Cutting.</b> Swedish Side, Inches. 5 6 Per dozen.....\$4 50 5 75
<b>Coat and Hat.</b> Common Wire.....per gro. 1 25-1 65	<b>Drawing.</b> Standard.....(New List) 15% Adjustable.....15% Barton's Carpenters'.....15%	<b>MALLETS.</b> <b>Carpenters'.</b> Fibre Head, No. 2, per doz. \$16 50 " No. 3 " 19 50 " No. 4 " 28 50 Round Hickory....." \$3 00-5 00 " Lignumvitae....." 6 25-10 50 Square Hickory....." 3 50-5 50 " Lignumvitae....." 8 00-12 00	<b>HOSE.</b> Magic.....per doz. \$9 80 Diamond....." 5 75
<b>Conductor.</b> Iwan's Tinned Sickle.....List.	<b>Hay.</b> Iwan's Solid Socket.....doz.\$13 00 Heath's.....13 00 Iwan's, Sickle Edge.....15 00 Iwan's, Impv'd Serrated.....15 50	<b>MATS.</b> <b>Door.</b> National Rigid.....50&10&5% Acme Steel Flexible.....30%	<b>NOZZLES.</b> <b>Square Tapped.</b> \$1.85 off per 100 lbs. <b>Hexagon Tapped.</b> \$1.85 off per 100 lbs.
<b>Corn.</b> Common, riveted, painted red.....per doz. Nets Little Giant....."	<b>Hedge.</b> Challenge.....per doz. \$6 00 Diston's.....3 75	<b>Stone.</b> No. 2.....per gro. Nets No. 1....." No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. 1 10 No. 2 Asbestos Toasters, with ring.....per doz. 60	<b>NUTS, HOT PRESSED</b> <b>Square Tapped.</b> \$1.85 off per 100 lbs. <b>Hexagon Tapped.</b> \$1.85 off per 100 lbs.
<b>Gate.</b> See Goods, Bright Wire.	<b>Mincing.</b> Common, Single....." 60 Common, Double....." 90 Streeter, 4-blade....." 1 30 Streeter, 6-blade....." 2 00	<b>MATTOCKS.</b> Plumbs.....25%	<b>OILERS</b> <b>Chase Pattern.</b> Brass and Copper.....10% Zinc.....35% <b>Engineers'.</b> Tin.....per doz. \$7 00@ 9 00 Machine.....per doz. \$0 85
<b>Grass.</b> Common Nos. 1 3 5 7 Per doz...\$4 50 3 50 3 75 3 25	<b>Putty.</b> Common.....per doz. \$0 75@1 50 Lander's.....1 75@2 50	<b>MEASURES.</b> Galvanized, doz.....Nets Japanned, doz.....Nets	<b>OPENERS.</b> Box. See Box Chisels
<b>Hammock.</b> With plate.....per doz. 1 10 With screw....." 1 00	<b>Scraping.</b> Beech Handle.....90@1 10 Lander's.....5 50@6 50	<b>MILLS, COFFEE.</b> Enterprise.....161% Parker.....50&5% Arcade.....40-10%	<b>OUTFITS, COBBLING</b> Combination.....per doz.\$16 06 Economy....." 8 50 Family....." 14 50
<b>Lambrequin, or Drapery, per gro.....30c</b>	<b>Doors.</b> Mineral.....per doz. \$2 10 Porcelain.....2 20 Jet.....2 20	<b>MITRE BOXES.</b> See Boxes.	<b>FAILS.</b> <b>Cream.</b> 14-qt., without gauge, per doz. \$9 50 18-qt., " " " 11 00 20-qt., " " " 11 75
<b>Picture.....50%@50&amp;10%</b>	<b>LADDERS.</b> <b>Common Long.</b> Per ft.....17c@23c <b>Extension.</b> Per ft.....22 to 28 <b>Step.</b> Common, per ft.....23c Common, with Shelf, add 10c. IXL.....34c Challenge, 6 to 9 ft.....55c 10 to 16 ft.....60c	<b>MOPS</b> <b>Cotton. Star (Cut Ends).</b> Pounds 12' 15' 18' 24'-3 oz. Per doz. \$4 50 5 65 6 75 9 00	<b>Sap.</b> 10-qt., IC Tin.....per doz. \$4 00 12 " " " 5 50
<b>Potato and Manure.....Nets</b>	<b>LANTERNS.</b> <b>Bull's Eye Police.</b> 3-in. Flash Light.....per doz. \$13 00	<b>MOWERS, LAWN.</b> <b>Gladiator—B. B.</b> Inches.....16 18 20 Each.....\$6 50 7 25 8 00 <b>King Universal—B. B.</b> Each.....\$5 25 5 75 6 00 Inches.....14 16 18 <b>Big Giant.....</b> \$3 50 3 90 4 25	<b>Stock</b> Galv'd. qts. 14 16 18 20 Per doz...\$9 75 10 75 12 75 14 50
<b>Screw.</b> Brass.....70%	<b>LEADERS, CATTLE.</b> Nos.....51 52 Per doz.....\$1 35 1 45	<b>NAILS.</b> <b>Cut Steel.....</b> Prices on Application <b>Cut Iron.....</b> " " " "	<b>Water.</b> Galvanized, qts. 10 12 14 Per doz.....\$5 75 6 50 7 25
<b>(See Goods, Bright Wire.)</b>	<b>LEATHER, LACE.</b> Rawhide 1/2".....100 ft. \$3 00 " 1/4".....4 40	<b>Wire.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>Wood.</b> Cable, 2-Hoop.....per doz. Nets Cable, 3-Hoop....." Nets Cedar, 3-Hoop, brass.. " Nets
<b>Seat Spring.....per lb. 51c</b>	<b>LEATHERS, PUMP.</b> Valve and Plunger.....10%	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>PANS.</b> <b>Dripping.....</b> Net
<b>HOSE, GARDEN.</b> Per ft. Guaranteed 3 ply 1/2 inch.....16 c " 4 ply 1/2 inch.....18 1/2 c " 5 ply 1/2 inch.....13 1/2 c	<b>LIFTERS.</b> <b>Stone Cover.</b> Coppered.....per gro. \$3 25@5 50 Alaska.....8 00 Alaska.....10 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>Fry.</b> Common.....Nets Acme....."
<b>COTTON COV. RUBBER HOSE.</b> High Grade Apache 1" guar. press. 400 .bs.....40c	<b>Lines.</b> <b>Twisted in 20-ft. hanks.</b> Nos. 4 6 7 8 9 Gro.....Prices on Application <b>Twisted in 50-ft. balls.</b> Nos. 1 2 3 4 Per doz.....Prices on Application <b>Braided in 20-ft. hanks.</b> Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....."	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>Roasting.</b> Paxton, Nos. 1 2 3 4 Per doz.....Nets Neverburn....." Savory No. 200.....per doz. \$8 40
<b>HUSKERS.</b> Nos.....B E Per doz.....New Nets No. 59.....per doz. New Nets	<b>LANTELS.</b> <b>3-in. Flash Light.....</b> per doz. \$13 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>Building.</b> Plain.....per 100 lbs. 1 1/2 c Tarred....." 1 1/2 c Tarred Felt....." 1 1/2 c Red Rosin, per ton.....\$75 00
<b>IRON, PIG.</b> See Metals.—First column.	<b>LEATHERS, PUMP.</b> Valve and Plunger.....10%	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>Sand and Emery.</b> No. 1, per ream, best grade... \$5 40 No. 1, per ream, cheaper grade. 4 85
<b>IRONS.</b> <b>Curling.</b> C.....per doz. \$4 40 B....." 50 A....." 58 Princess....." 1 25 Thelma....." 1 25 <b>Pinking.....</b> " 1 00	<b>LIFTERS.</b> <b>Stone Cover.</b> Coppered.....per gro. \$3 25@5 50 Alaska.....8 00 Alaska.....10 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	<b>Wrapping.</b> Express.....100 lbs. Nets
<b>Plane.</b> Wood Bench.....Add 10% to list	<b>LANTERS.</b> <b>Bull's Eye Police.</b> 3-in. Flash Light.....per doz. \$13 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	
<b>Sad.</b> Charcoal.....per doz. \$11 00 Common, polished, per 100 lbs. 7 75 No. 70 Asbestos.....\$1 50 net No. 100.....1 75 net Common, nickel plated.....8 25 Mrs. Pott's. No. 50 J, Enterprise, per set, Nets No. 55 J, " " " " No. 50 T, " " " " No. 55 T, " " " " Tailors' Sad.....per lb. " Tailors' Goose....." "	<b>LANTERS.</b> <b>Bull's Eye Police.</b> 3-in. Flash Light.....per doz. \$13 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	
<b>Locomotive.....30%</b>	<b>LANTERS.</b> <b>Bull's Eye Police.</b> 3-in. Flash Light.....per doz. \$13 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	
<b>Wagon.</b> Richard's No. 1.....per doz. \$15 50 Miller.....20 00	<b>LANTERS.</b> <b>Bull's Eye Police.</b> 3-in. Flash Light.....per doz. \$13 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	
<b>Oliver.</b> Nos.....0 00 Each.....\$0 60 \$0 80	<b>LANTERS.</b> <b>Bull's Eye Police.</b> 3-in. Flash Light.....per doz. \$13 00	<b>WIRE.</b> Small Lots...Prices on Application <b>ement Coated.</b> Small Lots....Prices on Application	

PARERS	
<b>Apple.</b>	
Goodell's.....per doz. \$10 80	
Turntable....." 11 10	
White Mountain....." 8 40	
Reading, No. 78....." 11 40	
<b>Potato.</b>	
Goodsell's Saratoga, 10 1/2 in., dz. 6 50	
Goodsell's Saratoga, 5 in., dz. 5 50	
PICKS.	
Adze Eye Ore.....22 1/2%	
Drifting and Poll Picks.....22 1/2%	
Plumbs, Railroad.....22 1/2%	
Surface.....22 1/2%	
PINCERS.	
Carpenters', cast steel	
Inches.....6 8 10 12	
Per doz.....\$3 75 4 75 6 25 7 00	
Blacksmiths.....45%	
Heller's.....40%	
PINS.	
Clothes.	
Common.....per box of 5 gro. \$0 95	
<b>Pickel.</b>	
Fluted, 15-in.....per doz. \$1 10	
Fluted, 21-in....." 1 60	
Spiral....." 1 90	
PIPE.	
<b>Conductor.</b>	
Plain Round and Round Corrugated	
29 Gauge.....65%	
28 ".....55%	
26 ".....45%	
24 ".....20%	
Square Corrugated A and B and Octagon.	
29 Gauge.....50%	
28 ".....45%	
26 ".....35%	
24 ".....15%	
Galvanized Toncan Metal, Genuine	
O. H. Iron, Lyonore Metal, Char	
coal Iron and Keystone C. B.	
Plain Round and Round Corrugated	
28 Gauge.....50%	
26 ".....40%	
24 ".....15%	
Square Corrugated A and B Polygon and Octagon.	
28 Gauge.....45%	
26 ".....35%	
24 ".....15%	
14 and 16 oz. Copper, all designs.....20%	
<b>Portico Elbows.</b>	
Galvanized and Terne Steel.	
1-inch.....45%	
1 1/2-inch.....45%	
1 3/4-inch.....45%	
2-inch.....45%	
Tubing.....40%	
Discounts on Round apply on sizes 2 inch to 6 inch inclusive.	
Freight allowed on 15 dozen or more Less than 15 dozen F. O. B. Factory	
Terms: 30 days net, 2% ten days.	
Standard Gauge Conductor Pipe, plain or corrugated.	
Not Nested.....55%	
Nested solid.....60% off	
<b>Stove.</b>	
Per 100	
29-Gauge, 3-inch.....\$12 25	
" 4-inch.....13 75	
" 5-inch.....15 25	
" 6-inch.....16 25	
" 7-inch.....19 00	
T-Joint, Made-up.	
6-inch.....per 100 \$35 00	
<b>Furnace Pipe.</b>	
Double Wall Pipe and Fittings 25%	
Single Wall Pipe, Round Pipe	
Fittings.....25%	
Galvan'd and Black Iron Pipe.	
Shoes, etc.....20%	
PLANES.	
Stanley Iron Bench.....net	
PLATES, TIN.	
See Metals in Column 1.	
PLIERS.	
Giant, Button's—Nets	
<b>Cutting.</b>	
Bernard's.....New Prices	
Lodi.....New Prices	
Paragon.....New Prices	
<b>Fencing.</b>	
Black Bull.....All Nets	
Farmers' Choice.....All Nets	
Russell's.....All Nets	
<b>Flat and Round Nose.</b>	
Bernard's.....New Prices	
Lodi.....New Prices	
Paragon.....New Prices	

<b>Tinners'.</b>	
Hollow.....Net list	
Solid.....each, 10c	
PLUMBS AND LEVELS.	
Common.....Nets	
Cook's.....40%	
Davis' Iron.....25%	
Davis' Inclinator.....15%	
POINTERS, SPOKE.	
Stearns' No. 1.....per doz. \$ 8 00	
" No. 2....." 10 00	
POKERS, STOVE.	
Wrt Steel, str't or bent per doz. \$0 75	
Nickel Plated, coil han's " 1 10	
POLISH.	
<b>Metal.</b>	
Wizard, 6 oz.....per gross \$18 00	
" 1 pt....." 20 40	
" 1 pt....." 36 00	
" 1 qt....." doz. 6 00	
" 1 gal....." 10 80	
" 1 gal....." 18 60	
<b>Stove</b>	
Per gross	
Black Eagle Paste 5 oz.....\$13 80	
" " 1 lb.....17 40	
" " 1 lb.....31 20	
" " 5 lbs. per case.....5 25	
Black Eagle Liquid, 6 oz per gross.....15 60	
Black Kid Paste, 5 lbs. per case 6 00	
Black Jack Liquid 1 pt. per gross.....15 60	
Black Jack Paste #10 per gross 13 20	
FIRE POTS.	
Clayton & Lambert's, each \$4 00@6 00	
Gate City.....each. 6 25	
Gem.....each. \$6 75@8 50	
POWDER.	
See Ammunition.	
PRESSES, FRUIT AND JELLY.	
Enterprise Manufacturing Co.....25%	
PRIMERS.	
See Amunition.	
PRUNERS.	
Diaston's Pole.....per doz. \$18 00	
Water's Improved....." 60%	
PULLERS.	
<b>Cork.</b>	
Daisy.....each, \$3 10	
Phoenix....." 1 40	
Quick and Easy....." 2 70	
<b>Nail.</b>	
Giant.....per doz. 14 50	
Never-Slip....." 17 00	
PULLEYS.	
Awning—Jap'd.....10%	
Clothes Line.....10%	
<b>Hay Fork.</b>	
Iron Wheel, 5-in.....per doz. 2 50	
Wood Wheel, 6-in....." 2 65	
Wood Wheel, 6-in., pass knot, .....per doz. 3 00	
<b>Sash.</b>	
Common.....Net	
Common-Sense, 2-in.....Net	
Empire Pattern, 2-in.....Net	
Ideal.....Net	
Steel.....Net	
PUMPS.	
<b>Pitcher Spout.</b>	
Nos. 1 2 3 4	
Each.....Nets	
<b>Spray.</b>	
Midget Junior.....per doz. 3 75	
New Misty....." 6 00	
Crescent....." 6 50	

PUNCHES.	
<b>Conductors.</b>	
No. 22.....per doz. \$3 00	
Machine.....per lb. 25	
<b>Saddlers'.</b>	
Common.....per doz. 1 50 to 5 00	
<b>Revolving Spring.</b>	
Stearns, No. 10.....per doz. \$ 6 25	
" No. 40....." 12 00	
" No. 60....." 16 00	
PUTTY.	
Strictly pure.....per 100 lbs. \$4 25	
RAIL.	
<b>Barn Door.</b>	
Matchless, 1-in.....5c	
Matchless, 1 1/2-in.....7c	
Storm King.....5c	
<b>Sliding Door.</b>	
Bronzed wrought iron.....per ft. 8 1/2c	
RAKES.	
<b>Garden.</b>	
Steel, Bow, 12-inch Teeth.....Per doz. \$8 50	
Steel, Bow, 14-inch....." 9 25	
Malleable Iron, 12-in....." 4 75	
Malleable Iron, 14-in....." 5 00	
<b>Hay.</b>	
Wood, 10 Teeth.....\$4 00	
<b>Lawn.</b>	
20 Teeth.....per doz. \$5 50	
RASPS—See Files.	
RAZORS—SAFETY.	
Gillette.....per doz. \$45 00	
Auto Stop....." 45 00	
Gem....." 8 40	
Gem (3 doz. lots)....." 8 00	
Ever Ready....." 8 40	
Ever Ready (3 doz. lots)....." 8 00	
RAZOR STROPS.	
Star (Honing).....50%	
REGISTERS.	
Japanned, Bronzed & Plated.....20%	
Solid Brass or Bronze Metal prices on application.....20%	
Baseboard.....20%	
REGISTER FACES.	
Japanned, Bronzed and Plated.	
4x6 to 14x14.....30%	
14x14 to 38x42.....50%	
REVOLVERS.	
<b>Iver Johnson Safety Automatic Hammer.</b>	
Hammerless.....New Nets	
I. J. Model 1900....."	
RINGS AND RINGERS.	
<b>Bull.</b>	
Copper.....2 1/2-in. 3-in. per doz. \$2 75 \$3 25	
Real's Improved Self-Piercing copper, doz. 3 40	
Steel, per doz.....1 50 1 80	
<b>Hog.</b>	
Blair's Rings.....per doz. \$ 75	
Blair's Ringers....." 1 00	
Brown's Rings....." 72	
Brown's Ringers....." 1 00	
Hill's Rings....." 1 00	
Hill's Ring, boxes....." 72	
Major Rings....." 60	
Perfect Rings....." 1 50	
Wolverine Rings....." 1 65	
Wolverine Ringers....." 1 10	
<b>Fruit Jar.</b>	
White.....per lb.....30c	
<b>Key.</b>	
Split, round.....per doz. \$0 17	
Split, square....." 32	
Ball, round....." 40	
RIVETS.	
Copper Belt.....Add 15% to list	
Coppered Iron.....30%	
Tinners'.....30%	
Hame.....per lb. \$0 17	
Slotted Clinch.....per doz. 60c@1 10	
<b>Tubular.</b>	
Nos. 1 and 2 assorted sizes, 50 in box.....doz. 75c	
Nos. 1 and 2 assorted sizes, 10 in box.....doz. 1 40	
RIVET SETS.	
See Sets.	
ROPE.	
<b>Cotton.</b>	
1/2 5-16 in. Com. on reels, per lb.....85c	
1/2 5-16 in. Com. in coils....." 85c	
<b>Sisal.</b>	
1st Quality.....20c	
No. 2.....17 1/2c	
<b>Pure Manila.</b>	
1st quality, base.....per lb. 25 1/2c	
Hardware Grade.....per lb. 24 1/2c	
RULES.	
Hickory Board.....10%	
Log.....10%	

SAWS.	
<b>Band.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Buck.</b>	
Disston's.....Prices on applic'n	
Jackson's.....New nets	
<b>Butchers'.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Circular.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
Hiles'.....New nets	
<b>Compass.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Coping.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Cross-Cut.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Dehorning.</b>	
Disston's.....Prices on applic'n	
<b>Flooring.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Hack.</b>	
Disston's.....Prices on applic'n	
<b>Hand and Rip.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's No. 7.....Prices on applic'n	
Disston's Nos. 8, D8, 12, 76, 112, D100, and 120.....Prices on applic'n	
Keystone.....New nets	
<b>Keyhole.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Miller Box.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Panel.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's No. 7.....Prices on applic'n	
<b>Patternmakers'.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Pruning.</b>	
Disston's.....Prices on applic'n	
<b>Stairbuilders'.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
<b>Wood.</b>	
E. C. Atkins & Co. Prices on applic'n	
Disston's.....Prices on applic'n	
SAW BUCKS—See Bucks.	
SAW SETS—See Sets.	
SAW TOOLS—See Tools.	
SAW FRAMES.	
Common, plain.....per doz. \$1 50	
Common painted....." 2 10	
SCALES.	
<b>Counter.</b>	
Pelouse.....40&10%	
SCISSORS.	
Star.....60%	
SCOOPS.	
<b>Grain.</b>	
1 bu. "Hercules".....per doz. 3 70	
1 bu. "Hercules"....." 5 00	
SCRAPERS.	
<b>Box.</b>	
Triangular, No. 6.....per doz. \$6 25	
<b>Road.</b>	
Cubic ft.....7 5 3	
With runners, ea. \$7 00 6 50 6 20	
SCREEN DOOR HINGES.	
Cast iron.....gross, \$13 00	
Steel....." 9 50	
SCREWS.	
<b>Bench.</b>	
Iron, ins. 1 1 1/2 1 3/4 1 1/2	
\$9 75 1 50 13 75 21 50	
Wood, white maple.....per doz. 6 00	
Hand—Wood.....35%	
Hand Rail.....22 1/2%	
Jack.....33 1/2%	
Lag or Coach—all sizes, gimlet pointed.....45-5%	
<b>Saw—Centennial.</b>	
Nos.....1 2 3 4	
Per doz.....47c 55c 75c 90c	
<b>Wood.</b>	
F. H. Bright.....70-10-10%	
R. H. Blued.....65-10-10%	
F. H. Jap'd.....62-10%	
F. H. Brass.....42-10-5%	
R. H. Brass.....40-10-5%	
R. H. Nickel Plated.....57-10%	
SCYTHES.	
Clipper, Grass.....per doz. \$13 50	
Honest Dutchman....." 13 70	



SETS.		SQUARES.		TAPES, MEASURING.		WARE.			
Nail.		Steel and Iron.		Asses' Skin.		Glass Pots.			
Square head..... per doz. \$1 25		Try and Besel.		Lufkin's Steel.		Tinned.....Add 15% to list			
Cup point, knurled.. " 1 15		Try and Miller.		Lufkin's Metallic.		Enameled.....30%			
Rivet.		Try and Besel.		Lufkin's Pocket.....10%		WASH BOARDS—See Boards.			
Farmers'..... per doz. \$2 10		Fox's..... per doz. \$6 00		THERMOMETERS.		WASHERS.			
Tinner's..... 25%		Winterbottom's.....10%		Tin Case..... per doz. 80c@\$ 1 25		Standard O. G. cast iron... per lb. 3 1/2c			
Saw.		SQUEEZERS, LEMON.		Wood Back... " \$2 00@ 12 00		Wrought steel in 5-lb. boxes, per lb.:			
Aiken's Pattern..... per doz. \$6 50		Common Wood..... per doz. \$0 70		Glass..... " 12 00		In. 3/16 1/2 5/16 3/4 1 1 1/4 1 1/2 1 3/4 2 1/4 3 1/4 4 1/4 5 1/4 6 1/4 7 1/4 8 1/4 9 1/4 10 1/4 11 1/4 12 1/4 13 1/4 14 1/4 15 1/4 16 1/4 17 1/4 18 1/4 19 1/4 20 1/4 21 1/4 22 1/4 23 1/4 24 1/4 25 1/4 26 1/4 27 1/4 28 1/4 29 1/4 30 1/4 31 1/4 32 1/4 33 1/4 34 1/4 35 1/4 36 1/4 37 1/4 38 1/4 39 1/4 40 1/4 41 1/4 42 1/4 43 1/4 44 1/4 45 1/4 46 1/4 47 1/4 48 1/4 49 1/4 50 1/4 51 1/4 52 1/4 53 1/4 54 1/4 55 1/4 56 1/4 57 1/4 58 1/4 59 1/4 60 1/4 61 1/4 62 1/4 63 1/4 64 1/4 65 1/4 66 1/4 67 1/4 68 1/4 69 1/4 70 1/4 71 1/4 72 1/4 73 1/4 74 1/4 75 1/4 76 1/4 77 1/4 78 1/4 79 1/4 80 1/4 81 1/4 82 1/4 83 1/4 84 1/4 85 1/4 86 1/4 87 1/4 88 1/4 89 1/4 90 1/4 91 1/4 92 1/4 93 1/4 94 1/4 95 1/4 96 1/4 97 1/4 98 1/4 99 1/4 100 1/4 101 1/4 102 1/4 103 1/4 104 1/4 105 1/4 106 1/4 107 1/4 108 1/4 109 1/4 110 1/4 111 1/4 112 1/4 113 1/4 114 1/4 115 1/4 116 1/4 117 1/4 118 1/4 119 1/4 120 1/4 121 1/4 122 1/4 123 1/4 124 1/4 125 1/4 126 1/4 127 1/4 128 1/4 129 1/4 130 1/4 131 1/4 132 1/4 133 1/4 134 1/4 135 1/4 136 1/4 137 1/4 138 1/4 139 1/4 140 1/4 141 1/4 142 1/4 143 1/4 144 1/4 145 1/4 146 1/4 147 1/4 148 1/4 149 1/4 150 1/4 151 1/4 152 1/4 153 1/4 154 1/4 155 1/4 156 1/4 157 1/4 158 1/4 159 1/4 160 1/4 161 1/4 162 1/4 163 1/4 164 1/4 165 1/4 166 1/4 167 1/4 168 1/4 169 1/4 170 1/4 171 1/4 172 1/4 173 1/4 174 1/4 175 1/4 176 1/4 177 1/4 178 1/4 179 1/4 180 1/4 181 1/4 182 1/4 183 1/4 184 1/4 185 1/4 186 1/4 187 1/4 188 1/4 189 1/4 190 1/4 191 1/4 192 1/4 193 1/4 194 1/4 195 1/4 196 1/4 197 1/4 198 1/4 199 1/4 200 1/4 201 1/4 202 1/4 203 1/4 204 1/4 205 1/4 206 1/4 207 1/4 208 1/4 209 1/4 210 1/4 211 1/4 212 1/4 213 1/4 214 1/4 215 1/4 216 1/4 217 1/4 218 1/4 219 1/4 220 1/4 221 1/4 222 1/4 223 1/4 224 1/4 225 1/4 226 1/4 227 1/4 228 1/4 229 1/4 230 1/4 231 1/4 232 1/4 233 1/4 234 1/4 235 1/4 236 1/4 237 1/4 238 1/4 239 1/4 240 1/4 241 1/4 242 1/4 243 1/4 244 1/4 245 1/4 246 1/4 247 1/4 248 1/4 249 1/4 250 1/4 251 1/4 252 1/4 253 1/4 254 1/4 255 1/4 256 1/4 257 1/4 258 1/4 259 1/4 260 1/4 261 1/4 262 1/4 263 1/4 264 1/4 265 1/4 266 1/4 267 1/4 268 1/4 269 1/4 270 1/4 271 1/4 272 1/4 273 1/4 274 1/4 275 1/4 276 1/4 277 1/4 278 1/4 279 1/4 280 1/4 281 1/4 282 1/4 283 1/4 284 1/4 285 1/4 286 1/4 287 1/4 288 1/4 289 1/4 290 1/4 291 1/4 292 1/4 293 1/4 294 1/4 295 1/4 296 1/4 297 1/4 298 1/4 299 1/4 300 1/4 301 1/4 302 1/4 303 1/4 304 1/4 305 1/4 306 1/4 307 1/4 308 1/4 309 1/4 310 1/4 311 1/4 312 1/4 313 1/4 314 1/4 315 1/4 316 1/4 317 1/4 318 1/4 319 1/4 320 1/4 321 1/4 322 1/4 323 1/4 324 1/4 325 1/4 326 1/4 327 1/4 328 1/4 329 1/4 330 1/4 331 1/4 332 1/4 333 1/4 334 1/4 335 1/4 336 1/4 337 1/4 338 1/4 339 1/4 340 1/4 341 1/4 342 1/4 343 1/4 344 1/4 345 1/4 346 1/4 347 1/4 348 1/4 349 1/4 350 1/4 351 1/4 352 1/4 353 1/4 354 1/4 355 1/4 356 1/4 357 1/4 358 1/4 359 1/4 360 1/4 361 1/4 362 1/4 363 1/4 364 1/4 365 1/4 366 1/4 367 1/4 368 1/4 369 1/4 370 1/4 371 1/4 372 1/4 373 1/4 374 1/4 375 1/4 376 1/4 377 1/4 378 1/4 379 1/4 380 1/4 381 1/4 382 1/4 383 1/4 384 1/4 385 1/4 386 1/4 387 1/4 388 1/4 389 1/4 390 1/4 391 1/4 392 1/4 393 1/4 394 1/4 395 1/4 396 1/4 397 1/4 398 1/4 399 1/4 400 1/4 401 1/4 402 1/4 403 1/4 404 1/4 405 1/4 406 1/4 407 1/4 408 1/4 409 1/4 410 1/4 411 1/4 412 1/4 413 1/4 414 1/4 415 1/4 416 1/4 417 1/4 418 1/4 419 1/4 420 1/4 421 1/4 422 1/4 423 1/4 424 1/4 425 1/4 426 1/4 427 1/4 428 1/4 429 1/4 430 1/4 431 1/4 432 1/4 433 1/4 434 1/4 435 1/4 436 1/4 437 1/4 438 1/4 439 1/4 440 1/4 441 1/4 442 1/4 443 1/4 444 1/4 445 1/4 446 1/4 447 1/4 448 1/4 449 1/4 450 1/4 451 1/4 452 1/4 453 1/4 454 1/4 455 1/4 456 1/4 457 1/4 458 1/4 459 1/4 460 1/4 461 1/4 462 1/4 463 1/4 464 1/4 465 1/4 466 1/4 467 1/4 468 1/4 469 1/4 470 1/4 471 1/4 472 1/4 473 1/4 474 1/4 475 1/4 476 1/4 477 1/4 478 1/4 479 1/4 480 1/4 481 1/4 482 1/4 483 1/4 484 1/4 485 1/4 486 1/4 487 1/4 488 1/4 489 1/4 490 1/4 491 1/4 492 1/4 493 1/4 494 1/4 495 1/4 496 1/4 497 1/4 498 1/4 499 1/4 500 1/4 501 1/4 502 1/4 503 1/4 504 1/4 505 1/4 506 1/4 507 1/4 508 1/4 509 1/4 510 1/4 511 1/4 512 1/4 513 1/4 514 1/4 515 1/4 516 1/4 517 1/4 518 1/4 519 1/4 520 1/4 521 1/4 522 1/4 523 1/4 524 1/4 525 1/4 526 1/4 527 1/4 528 1/4 529 1/4 530 1/4 531 1/4 532 1/4 533 1/4 534 1/4 535 1/4 536 1/4 537 1/4 538 1/4 539 1/4 540 1/4 541 1/4 542 1/4 543 1/4 544 1/4 545 1/4 546 1/4 547 1/4 548 1/4 549 1/4 550 1/4 551 1/4 552 1/4 553 1/4 554 1/4 555 1/4 556 1/4 557 1/4 558 1/4 559 1/4 560 1/4 561 1/4 562 1/4 563 1/4 564 1/4 565 1/4 566 1/4 567 1/4 568 1/4 569 1/4 570 1/4 571 1/4 572 1/4 573 1/4 574 1/4 575 1/4 576 1/4 577 1/4 578 1/4 579 1/4 580 1/4 581 1/4 582 1/4 583 1/4 584 1/4 585 1/4 586 1/4 587 1/4 588 1/4 589 1/4 590 1/4 591 1/4 592 1/4 593 1/4 594 1/4 595 1/4 596 1/4 597 1/4 598 1/4 599 1/4 600 1/4 601 1/4 602 1/4 603 1/4 604 1/4 605 1/4 606 1/4 607 1/4 608 1/4 609 1/4 610 1/4 611 1/4 612 1/4 613 1/4 614 1/4 615 1/4 616 1/4 617 1/4 618 1/4 619 1/4 620 1/4 621 1/4 622 1/4 623 1/4 624 1/4 625 1/4 626 1/4 627 1/4 628 1/4 629 1/4 630 1/4 631 1/4 632 1/4 633 1/4 634 1/4 635 1/4 636 1/4 637 1/4 638 1/4 639 1/4 640 1/4 641 1/4 642 1/4 643 1/4 644 1/4 645 1/4 646 1/4 647 1/4 648 1/4 649 1/4 650 1/4 651 1/4 652 1/4 653 1/4 654 1/4 655 1/4 656 1/4 657 1/4 658 1/4 659 1/4 660 1/4 661 1/4 662 1/4 663 1/4 664 1/4 665 1/4 666 1/4 667 1/4 668 1/4 669 1/4 670 1/4 671 1/4 672 1/4 673 1/4 674 1/4 675 1/4 676 1/4 677 1/4 678 1/4 679 1/4 680 1/4 681 1/4 682 1/4 683 1/4 684 1/4 685 1/4 686 1/4 687 1/4 688 1/4 689 1/4 690 1/4 691 1/4 692 1/4 693 1/4 694 1/4 695 1/4 696 1/4 697 1/4 698 1/4 699 1/4 700 1/4 701 1/4 702 1/4 703 1/4 704 1/4 705 1/4 706 1/4 707 1/4 708 1/4 709 1/4 710 1/4 711 1/4 712 1/4 713 1/4 714 1/4 715 1/4 716 1/4 717 1/4 718 1/4 719 1/4 720 1/4 721 1/4 722 1/4 723 1/4 724 1/4 725 1/4 726 1/4 727 1/4 728 1/4 729 1/4 730 1/4 731 1/4 732 1/4 733 1/4 734 1/4 735 1/4 736 1/4 737 1/4 738 1/4 739 1/4 740 1/4 741 1/4 742 1/4 743 1/4 744 1/4 745 1/4 746 1/4 747 1/4 748 1/4 749 1/4 750 1/4 751 1/4 752 1/4 753 1/4 754 1/4 755 1/4 756 1/4 757 1/4 758 1/4 759 1/4 760 1/4 761 1/4 762 1/4 763 1/4 764 1/4 765 1/4 766 1/4 767 1/4 768 1/4 769 1/4 770 1/4 771 1/4 772 1/4 773 1/4 774 1/4 775 1/4 776 1/4 777 1/4 778 1/4 779 1/4 780 1/4 781 1/4 782 1/4 783 1/4 784 1/4 785 1/4 786 1/4 787 1/4 788 1/4 789 1/4 790 1/4 791 1/4 792 1/4 793 1/4 794 1/4 795 1/4 796 1/4 797 1/4 798 1/4 799 1/4 800 1/4 801 1/4 802 1/4 803 1/4 804 1/4 805 1/4 806 1/4 807 1/4 808 1/4 809 1/4 810 1/4 811 1/4 812 1/4 813 1/4 814 1/4 815 1/4 816 1/4 817 1/4 818 1/4 819 1/4 820 1/4 821 1/4 822 1/4 823 1/4 824 1/4 825 1/4 826 1/4 827 1/4 828 1/4 829 1/4 830 1/4 831 1/4 832 1/4 833 1/4 834 1/4 835 1/4 836 1/4 837 1/4 838 1/4 839 1/4 840 1/4 841 1/4 842 1/4 843 1/4 844 1/4 845 1/4 846 1/4 847 1/4 848 1/4 849 1/4 850 1/4 851 1/4 852 1/4 853 1/4 854 1/4 855 1/4 856 1/4 857 1/4 858 1/4 859 1/4 860 1/4 861 1/4 862 1/4 863 1/4 864 1/4 865 1/4 866 1/4 867 1/4 868 1/4 869 1/4 870 1/4 871 1/4 872 1/4 873 1/4 874 1/4 875 1/4 876 1/4 877 1/4 878 1/4 879 1/4 880 1/4 881 1/4 882 1/4 883 1/4 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Whiting Pattern, No. 21..... 5 75		Blind.		Game with Chains.		WEANERS.			
Eccentric Anvil, Hand, No, 395, N. P. Morrill Pattern,..... per doz. 11 50		Barbed..... per lb. 21 @ 22c		Victor No. 1..... \$1 65		Fuller's, per doz. .... \$2 00 to \$2 50			
SHARPENERS, SKATE.		Butter Tub..... " 16 @ 19c		Oneida Jump No. 1..... 2 25		Tyler's Safety, per doz. 1 85 to 2 40			
Diamond..... per doz. \$1 60		Fence—		Newhouse No. 1..... 3 85		Carroll's, per doz. .... 3 00 to 3 75			
Perfect..... 1 20		Polished..... per 100 lbs. \$5 45		Mouse and Rat.		Hoosier, per doz. .... 3 50 to 4 60			
SHEARS.		Galvanized..... 6 15		Out O'Sight Mouse..... \$ 8 00		Shaw Perfected..... 3 00 to 3 75			
Per Doz.		Galvanized..... per 100 lbs. 6 50		" " Rat..... 15 00		WEIGHTS.			
Nickel Plated, Straight, 6"..... \$11 50		Wrought.		" " Mole..... 100 00		Hitching..... per lb. Nets			
" " " 7"..... 12 95		Staples, Hasps, Hooks and		#44 Pocket Gopher..... 20 00		Sash—L.o.b. Chicago			
" " " 8"..... 14 40		Staples, Hasps, Hooks and		Victor Mouse..... 2 60		Ton lots, per ton..... \$60 00			
Japanned, Straight 6"..... 10 25		Staples, and Hooks and		Hold Fast Mouse..... 2 60		Smaller lots, per ton..... 63 00			
" " " 7"..... 11 50		Staples..... 50&10%		Victor Rat..... 11 00		WHEEL BARROWS.			
" " " 8"..... 12 80		Extra heavy..... 35%		Hold Fast Rat..... 11 00		No. 4 Tubular Steel..... @ \$7 25			
Tinner's—See Snips.		STEELYARD.		Official Rat..... 13 50		Common Tray or Stave Tray @ 2 75			
SHEAVES, SLIDING DOOR.		Discount 25%.		Wood Choker Mouse, 4 Holes 11 00		Angle leg. garden..... @ 4 75			
Common.		STONES.		TROWELS.		WHEELS.			
Inches.... 3 4 5		Ass.		Clover Leaf..... 30%		Carborundum..... 50%			
Per set..... \$1 40 1 75 2 40		Hindustan..... per lb. New Nets		Brade's..... 15&5%		Emery..... 60%			
Half's.		More Grit..... " "		Diaston's..... 30%		Well. Ins..... 8 10 12			
Per set..... \$1 80 2 10 2 75 25		Washita..... " "		Rose's..... Net		Per doz..... \$5 50 7 25 8 50			
SHELLS—See Ammunition.		Emery.		Plasterers'.		12 in. heavy hoisting, per doz. \$25 00			
SHELLERS, CORN.		No. 126..... per doz. New Nets		Clover Leaf..... 40%		WIRE.			
Union..... per doz. \$6 75		Oil—Mounted.		Diaston's..... 25%		In coils..... Nets			
SHIELDS.		Arkansas Hard No. 7 per doz. New Nets		W. & McP..... Net		In 1-lb. spools, new list..... Nets			
Expansion Bolt Shields..... 60%		Arkansas Soft..... " "		TRUCKS.		Broom—Tinned..... Nets			
SHOES.		Washita No. 717..... " "		Bag..... each, \$3 75		Cable—Same price as Barbed Wire.			
Conductor..... 60%		Oil—Unmounted.		Warehouse or store.....		Copper.			
SHOT—See Ammunition.		Arkansas Hard..... per lb. New Nets		No. 1, each..... \$24 50		In coils..... Nets			
SHOVELS AND SPADES.		Arkansas Soft..... " "		" 2, "..... 22 50					

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American Steel & Wire Co.	Chicago, Ill.
Pittsburgh Steel Co.	Pittsburgh, Pa.
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Friedley-Voshardt Co.	Chicago, Ill.
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Merchant & Evans Co.	Philadelphia, Pa.

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Abbott Mfg. Co.	Cleveland, Ohio
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Burton Co., W. J.	Detroit, Mich.
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Diston & Sons, Inc., Henry.	Philadelphia, Pa.
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Nicholson File Co.	Providence, Rhode Island
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Burgess Soldering Furnace Co.	Columbus, Ohio
Clayton & Lambert Mfg. Co.	Detroit, Mich.
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Cole Mfg. Co.	Chicago, Ill.
Co-operative Foundry Co.	Rochester, New York
Danville Stove & Mfg. Co.	Danville, Pa.
Forest City Fdy. & Mfg. Co.	Cleveland, Ohio
Hall-Neal Furnace Co.	Indianapolis, Ind.
Haynes-Langenberg Mfg. Co.	St. Louis, Mo.
Henry-Miller Foundry Co.	Cleveland, Ohio
Hero Furnace Co.	Chicago, Ill.
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Standard Furnace & Supply Co.	Omaha, Neb.
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Wise Furnace Co.	Akron, Ohio
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<b>Horse Shoes.</b>	
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Bertsch & Co.	Cambridge City, Ind.
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Niagara Machine & Tool Wks.	Buffalo, N. Y.
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Chasworth Mfg. Co.	Chasworth, Ill.
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<b>Metals—Perforated.</b>	
Harrington & King Perforating Co.	Chicago, Ill.
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Dominion Asbestos & Rubber Corp.	New York, N. Y.
Jack Corporation, A. W.	Lockport, N. Y.
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